

**RURAL AND NEW TOWN PLANNING COMMITTEE
OF THE TOWN PLANNING BOARD**

RNTPC Paper No. 3/16

For Consideration by

The Rural and New Town Planning Committee on 23.12.2016

**PROPOSED AMENDMENTS TO THE
APPROVED SHA TIN OUTLINE ZONING PLAN NO. S/ST/32**

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1. Introduction

The purposes of this paper are to seek Members' agreement that:

- (a) the proposed amendments to the approved Sha Tin Outline Zoning Plan (OZP) No. S/ST/32 as shown on the draft Sha Tin OZP No. S/ST/32A (**Annex B**) and its Notes (**Annex C**) are suitable for exhibition for public inspection under section 5 of the Town Planning Ordinance (the Ordinance); and
- (b) the revised Explanatory Statement (ES) of the OZP (**Annex D**) is an expression of the Town Planning Board (the Board)'s planning intention and objectives for various land use zones on the OZP; and is suitable for exhibition together with the OZP and its Notes.

2. Status of the Current Sha Tin OZP

- 2.1 On 1.12.2015, the draft Sha Tin OZP No. S/ST/31 was approved by the Chief Executive in Council (CE in C) under section 9(1)(a) of the Ordinance which was subsequently renumbered as S/ST/32. On 11.12.2015, the approved Sha Tin OZP No. S/ST/32 was exhibited for public inspection under section 9(5) of the Ordinance.
- 2.2 On 18.10.2016, the CE in C referred the approved Sha Tin OZP No. S/ST/32 to the Board for amendment under section 12(1)(b)(ii) of the Ordinance. The reference back of the OZP was notified in the Gazette on 28.10.2016 under section 12(2) of the Ordinance.

3. The Proposed Amendments

- 3.1 The proposed amendments mainly involve the proposed Sha Tin Cavern Sewage Treatment Works (STCSTW) at A Kung Kok and its supporting facilities (Items A1 to A4), proposed Columbarium and Garden of Remembrance at On Hing Lane, Shek Mun (Items B1 to B5), rezoning of Olympic Stables at Sha Tin Race Course (Item C) and proposed public housing development at On Muk Street, Shek Mun (Item D).

- 3.2 The 2011-12 Policy Address announced that the Government would explore the use of rock cavern development as an innovative method to expand Hong Kong's land resources. To take forward the initiative, the Drainage Services Department (DSD) commenced a detailed feasibility study (the Study) on the relocation of the Sha Tin Sewage Treatment Works (STSTW) to cavern in May 2012. The Study confirmed that relocating the STSTW to cavern in an area currently zoned "GB" at A Kung Kok (Amendment Items A1 to A3 on **Plan 1a**) is feasible. The future use of the existing STSTW site is subject to further study.
- 3.3 With a growing and ageing population in Hong Kong, the number of deaths and the corresponding number of cremations have been rising gradually year on year. As such, there is a pressing need for the supply of niches. To meet the demand for public niches, the Government announced in July 2010 that all 18 districts would collectively share the responsibility of developing district-based columbarium facilities. A site at On Hing Lane, Shek Mun, which is currently zoned "Industrial" ("I"), "Other Specified Uses" annotated "Refuse Transfer Station" ("OU(RTS)") and "GB" (Amendment Items B1 to B3 on **Plan 1b**) has been identified for the columbarium development in Sha Tin.
- 3.4 The Olympic Stables located at the southwest side of Sha Tin Race Course was originally used by the Hong Kong Sports Institute (HKSI) and was later used as the venue for 2008 Olympic and Paralympic Equestrian Events. After the completion of the Equestrian Events, the Hong Kong Jockey Club (HKJC) proposed to retain the site for stables, training facilities for jockeys and horses, horse swimming pool and ancillary facilities to preserve the legacy of co-hosting the Olympic event and to support local horse racing development. In view that redevelopment of HKSI has substantially increased the total gross floor area to accommodate additional facilities to meet the future needs of the elite sports training, the site is no longer required for HKSI's future development. The site has been operated and managed by the HKJC since the end of the 2008 Olympic Equestrian Events to support horse racing activities. It is currently zoned "Government, Institution or Community" ("G/IC") (Amendment Item C on **Plan 1b**). It is proposed to adjust the zoning boundary of "Other Specified Uses" annotated "Race Course" ("OU(Race Course)") to include the Olympic Stables to better reflect the current use and function of the site.
- 3.5 It was stated in the 2013 Policy Address that the Government would adopt a multi-pronged approach to identify suitable land to meet housing and other needs. In this regard, the Government had identified some 150 potential housing sites, including sites zoned "Open Space" ("O") and "G/IC" without implementation programme, for housing development. One of the sites is at On Muk Street in Shek Mun (Amendment Item D on **Plan 1b**) which is currently zoned "O".

Amendment Items A1 to A4 – Proposed Sha Tin Cavern Sewage Treatment Works (STCSTW) and its supporting facilities (**Plans 2a and 3a**)

- 3.6 The Item A1 site, covering a land area of about 23.45 ha, is located at the underground area of a "Green Belt" ("GB") zone at A Kung Kok. The site has been identified by DSD for the relocation of STSTW to cavern. The proposed STCSTW consists of sewage and sludge treatment facilities, access tunnels and

other associated facilities in cavern. It is proposed to designate the site from “GB” to “Green Belt (1)” (“GB (1)”) to facilitate an underground sewage treatment works while preserving the vegetated land above.

- 3.7 To support the operation of STCSTW, the administration building, electricity substation, plant room and ventilation building, with proposed building heights ranging from about 24mPD to 59mPD, are proposed at sites at-grade outside the cavern (**Drawings 1 and 2**). It is proposed to rezone Items A2 and A3 sites from “GB” to “Other Specified Uses” annotated “Sewage Treatment Works” (“OU(STW)”). The Item A2 site, covering a land area of about 2.72 ha, is located at A Kung Kok Street and Mui Tsz Lam Road (**Plan 4a**). Part of the site is currently occupied by Evangelical Lutheran Church of Hong Kong Recreation Camp and Training Centre under short term tenancy (STT). The Item A3 site, covering a land area of about 0.31 ha, is a vegetated man-made slope located at Mui Tsz Lam Road opposite to Chevalier Garden (**Plan 4b**).
- 3.8 The Item A4 site, covering a land area of about 0.11 ha, is a small parcel of land located at the junction of A Kung Kok Street and Mui Tsz Lam Road. The site is currently being used as road (**Plan 4c**). It is proposed to rezone the site from “GB” to “Road” to reflect its existing use and site condition.

Amendment Items B1 to B5 – Proposed Columbarium and Garden of Remembrance at On Hing Lane, Shek Mun (**Plans 2b and 3b**)

- 3.9 The Items B1, B2 and B3 sites, covering a land area of about 2.28 ha, 0.23 ha and 0.18 ha respectively, are bounded by a vegetated man-made slope zoned “GB” to the north, east and south, the Sha Tin Refuse Transfer Station zoned “OU(RTS)” to the west and the Tate’s Cairn Highway to the northwest. The sites are currently occupied by the Construction Industry Council Training Academy Shatin Training Ground under short term tenancy (STT) (**Plans 4d to 4f**). To facilitate the columbarium and garden of remembrance development for the provision of about 40,000 niches (**Drawing 4**), it is proposed to rezone Items B1, B2 and B3 sites, which are now zoned “I”, “GB” and “OU(RTS)” respectively, to “Other Specified Uses” annotated “Columbarium and Garden of Remembrance” (“OU(Columbarium and Garden of Remembrance)”).
- 3.10 The Item B4 site, covering a land area of about 0.26 ha, is a strip of land located along the eastern fringe of the “OU(RTS)” site. It is currently being used as a vehicular access for the Sha Tin Refuse Transfer Station (**Plan 4g**). It is proposed to rezone the site from “I” to “OU(RTS)” to reflect the existing use.
- 3.11 The Item B5 site, covering a land area of about 0.23 ha, is a narrow strip of vegetated man-made slope located at On Hing Lane, Shek Mun (**Plan 4g**). It is proposed to rezone the site from “I” to “GB” to better reflect its existing status which forms part of the larger “GB” zone to the north.

Amendment Item C – Olympic Stables at Sha Tin Race Course (Plans 2c and 3c)

- 3.12 The Item C site, covering a land area of about 4.76 ha, is the Olympic Stables currently managed and operated by the HKJC (**Plan 4h**). The site is accessible only via roads within the racecourse. To better reflect the current use and function of the site, it is proposed to be rezoned from “G/IC” to “OU(Race Course)”. Furthermore, the Notes of the OZP for the Sha Tin Race Course is proposed to be updated to provide a clear planning intention for the land and a set of uses which are permitted as of right or may be permitted on application to the Board. In particular, ‘Place of Recreation, Sports or Culture’ has been included as a Column 2 use to allow flexibility for HKJC to provide communal sports and recreational facilities within Sha Tin Race Course to better serve the local community through the planning application system.

Amendment Item D – Proposed Public Housing Development (Plans 2b and 3b)

- 3.13 A site along the Shing Mun River Channel in proximity to the Shek Mun Business Area has been identified as a potential site for public housing development. The site was originally reserved for district open space by the ex-Municipal Council, but there is no development programme for the open space. The provision of open space in Sha Tin is generally sufficient to meet the requirements in accordance with the Hong Kong Planning Standards and Guidelines (HKPSG). In view that the site is formed and located in proximity to MTR Shek Mun Station and supporting retail facilities in Shek Mun, it is considered suitable to be rezoned for public housing development to meet the housing needs in the short-to-medium term.
- 3.14 However, the Kitchee Football Training Centre, under STT with a term of four years up to 9.9.2017, is located at the southeastern part of the site (**Plan 4i**). Rezoning of the land occupied by the football training centre is postponed until the relocation arrangement for the football training centre is settled.
- 3.15 In view of the above, only the Item D site is proposed to be rezoned from “O” to “Residential (Group A) 6” (“R(A)6”) subject to a maximum gross floor area of 26,240m²* and a maximum building height (BH) of 110mPD. A 20m-wide public waterfront promenade along the Shing Mun River Channel is proposed to be retained as open space for public enjoyment. (**Drawing 5**) The proposed public housing development is targeted for completion in 2021/22 and will provide a total of about 560 units.

* Equivalent to about plot ratio (PR) 6, which is the same as the PR of Shek Mun Estate Phase I and II zoned “R(A)4”.

4. Technical Considerations

- 4.1 Broad technical assessments on traffic, environmental and infrastructure, as well as visual and air ventilation aspects have been conducted to ascertain the feasibility of the proposed developments. The adequacy of provision of open space and G/IC facilities in the area has also been assessed.

Proposed Sha Tin Cavern Sewage Treatment Works and its supporting facilities

Environmental Aspect

- 4.2 The proposed STCSTW is a Designated Project (DP) under the Environment Impact Assessment Ordinance (EIAO). DSD has carried out an Environmental Impact Assessment (EIA) in accordance with the EIA Study Brief and the Technical Memorandum on EIAO (EIAO – TM). The EIA has determined the likely nature and extent of the environmental impacts arising from the construction and operation of the STCSTW including air, noise, water quality, land contamination, ecological and fisheries, landscape and visual, cultural heritage, waste management and health. The EIA has also identified mitigation measures to ensure compliance with environmental legislations and standards. According to the findings of the EIA, with the implementation of the proposed mitigation measures during the construction and operation phases, the proposed STCSTW would be environmentally acceptable and comply with the requirements of the EIAO and EIAO – TM. The EIA has been approved by Director of Environmental Protection (DEP) on 28.11.2016. The Executive Summary of the EIA is at **Appendix 1**.

Infrastructure Aspect

- 4.3 According to the Sewerage Impact Assessment (SIA), Drainage Impact Assessment (DIA) and Waterworks and Utilities Impact Assessment (WUIA), the existing/planned sewerage, drainage and waterworks facilities have sufficient capacities to cater for the proposed STCSTW development. The DEP, Chief Engineer/Mainland South of Drainage Services Department (CE/MS of DSD) and Chief Engineer/Development of Water Supplies Department (CE/Dev of WSD) consider the SIA, DIA and WUIA acceptable in principle.

Traffic Aspects

- 4.4 The Traffic Impact Assessment (TIA) results indicate that some critical junctions in the vicinity of the site are currently operating beyond capacity during peak periods. Meanwhile, traffic flow along A Kung Kok Street would be approaching design capacity during future design years. Improvement measures are proposed to mitigate identified traffic impacts arising from the proposed STCSTW during the construction and operation stage including a new access arrangement with junction improvement works at the junction of A Kung Kok Street / Mui Tsz Lam Road, restricting the discharging hours for construction vehicles to non-peak hours and introducing alternative access schemes for construction vehicles. A summary of the assessment results is at **Appendix 2**. The Commissioner for Transport (C for T) considers the TIA acceptable in principle.

Geotechnical Aspects

- 4.5 Geotechnical Review comprises a review of the existing available geotechnical information relevant to the project. The results indicate that there is no insurmountable problem from the geotechnical aspects. A more detailed assessment and review including ground investigation in a larger scale will be carried out at the detailed design stage.

Proposed Columbarium and Garden of Remembrance at On Hing Lane, Shek Mun

Traffic Aspect

- 4.6 Based on the TIA conducted by Food and Health Bureau (FHB) / Food and Environmental Hygiene Department (FEHD), the critical road junction at On Ming Street/ On Yiu Street is slightly overloaded on the weekday peak hour and the existing footpaths on both sides of On Hing Lane would also operate at marginal Level of Service upon full development of the proposed columbarium. To mitigate the identified traffic and transport impacts arising from the proposed columbarium, partial closure of the carriageway on On Hing Lane, provision of special bus services operating between MTR Shek Mun Station and the proposed columbarium site during Ching Ming and Chung Yeung Festivals, and provision of new pedestrian underpass for access from On Muk Street to the proposed columbarium site are proposed. A summary of the assessment results is at **Appendix 3**. The resultant impacts with appropriate mitigation measures are considered acceptable by C for T.

Environmental Aspect

- 4.7 As the site is in proximity to two schools and the Shek Mun Estate, the proposed columbarium is intended to be a pilot project to test the public acceptance of a completely smoke-free public columbarium, i.e. a columbarium without any facilities for the burning of offerings and joss sticks. No burning of offerings and joss sticks would be allowed in the proposed columbarium premises, including the niche floors and communal areas. Relevant technical assessments including Preliminary Environmental Review for the project will be conducted at the detailed design stage.

Visual Aspect

- 4.8 The visual appraisal (VA) (**Appendix 4** and **Drawings 3, 4 and 4a to 4d**) indicates that the proposed columbarium is not visually incompatible with the surrounding areas. For the vantage points at cycle track on On Ming Street, Hong Kong Baptist University and International Christian School, Shek Mun Estate Phase 1 and Phase 2, and Cycling Arena at Siu Lek Yuen Road Playground where the pedestrian or visitor flow are relatively high, the proposed columbarium development is totally concealed between tall trees and dense vegetation in the foreground and mountains in the background. Furthermore, aesthetically-designed columbarium buildings blending in well with ample landscaping works will be

adopted to minimize the visual impact and make the environment pleasant. The overall layout of the columbarium block will be subject to detailed architectural design at the subsequent stage. The Chief Town Planner/Urban Design and Landscape Unit of Planning Department (CTP/UD&L, PlanD) has no adverse comment on the VA.

Olympic Stables at Sha Tin Race Course

- 4.9 The proposed rezoning is to reflect the existing use of the site and will not involve new development proposals. The proposed rezoning would not have adverse impacts on the traffic, environmental and visual aspects. Relevant bureaux/departments including C for T, DEP, CTP/UD&L, PlanD, Secretary for Home Affairs (SHA) and District Officer (Sha Tin) (DO(ST)) have no objection to or adverse comment on the proposal.

Proposed Public Housing Development at On Muk Street, Shek Mun

Traffic and Visual Aspects

- 4.10 Housing Department (HD) has undertaken relevant technical assessments (i.e. TIA, and VA) to ascertain that the proposed public housing development would not have adverse impacts on the traffic and visual aspects.
- 4.11 The Site is well-served by railway network and road-based public transport services (including bus and green mini bus services), and is well-connected to adjacent developments by existing footpaths and pedestrian crossing facilities. The TIA results revealed that all assessed junctions and footpaths would be operating satisfactorily with spare capacity during both morning and evening peaks upon completion of the public housing development. Parking survey for goods vehicles has been carried out and the result revealed that there are sufficient parking capacities in the Shek Mun area. The proposed development will not cause significant traffic impact on the surrounding road network and the provision of car parking space is sufficient to meet the needs in accordance with the HKPSG. Improvement measures are proposed for junctions operating with marginal capacity. A summary of the assessment results is at **Appendix 5**. C for T has no in principle objection to the proposed public housing development from a traffic engineering perspective.
- 4.12 The VA (**Appendix 6**) conducted by HD indicates that for the vantage points at both sides of Shing Mun River where there are heavy pedestrian or visitor flow, the visual impact would be insignificant (**Drawings 5, 6, 6a to 6e**). The proposed development at a maximum building height of 110mPD coheres with the building height profile of the adjacent Shek Mun Estate Phase 2 (about 110-140mPD) and respects the building heights of City One Shatin (about 82-108mPD) located to the southwest of the Site across the Siu Lek Yuen Nullah. It is also compatible with the adjacent industrial-office buildings, i.e. Ever Gain Building (No. 3) (about 93mPD) and Ever Gain Centre (about 112mPD). Mitigation measures including setback from the waterfront promenade, semi-basement carpark and truncated built form are proposed to minimize the visual impact of the proposed development. The CTP/UD&L, PlanD considers that the proposed development

with a building height of about 32 storeys is generally compatible with the surrounding and single tower development will have insignificant impact on visual permeability. CTP/UD&L, PlanD has no adverse comment on the VA.

- 4.13 On the environmental aspect, the proposed public housing development would have about 12m building setback from On Muk Street to its north and not less than about 20m setback from its eastern boundary to allow buffer distance with adjacent industrial building and Kitchee Football Training Centre. Landscape treatment would be provided where appropriate to integrate the proposed development with the waterfront promenade. Adverse chimney emission and noise impacts on the subject site are not anticipated. Relevant technical assessments including Environmental Assessment Study (EAS) will be conducted at the detailed design stage.

Air Ventilation Aspect

- 4.14 For air ventilation, the Expert Evaluation (EE) on Air Ventilation Assessment (AVA) conducted by PlanD (**Appendix 7**) shows that winds from northeast and east are the dominant annual wind directions. In summer, wind mainly comes from the southwest direction. The proposed public housing block is oriented to facilitate the prevailing winds without substantial impediment from and to the surrounding developments and terrain. It is considered that the proposed public housing development would have no significant air ventilation impacts within the site and to the land uses in the vicinity. To further enhance the ventilation performance, it is recommended to adopt building separation, high permeability, ground floor level empty bay to facilitate wind penetration across the development and to enhance the ventilation of the surrounding, particularly On Muk Street under summer south western quadrant wind. CTP/UD&L, PlanD has no adverse comment on the EE on AVA.
- 4.15 The proposed public housing development will be guided by an administrative planning brief as stated in the ES of the OZP. The planning brief will set out the planning parameters, the design requirements as well as technical assessments to be conducted for the proposed development (paragraph 7.4.2 in **Annex D**).

Provision of Open Space and Government, Institution and Community (G/IC) Facilities

- 4.16 The proposed developments would not have adverse impact on the G/IC facilities and open space provision within the area covered by the OZP. The district and local open space and a range of G/IC facilities have been sufficiently provided in Sha Tin Planning Area (**Appendix 8**). There is a surplus of planned district and local open space of 17.96 ha and 58.64 ha respectively.
- 4.17 The planned provision for secondary schools and various G/IC facilities are generally adequate to meet the need of planned population of Sha Tin according to HKPSG. There will be a shortfall of primary school classroom (-12) and sports ground/sports complex (-1) for the district. While there is a slight shortfall of sports ground/sports complex, four sites have been reserved at Sha Tin Tau Road, Shui Cheun O, Ngan Shing Street and Fo Tan Industrial Area respectively for provision of sports centres. The provision of sports ground/sports complex would

need to be carefully planned by concerned bureaux/departments and be in tandem with the population build-up. Relevant departments will take into account population intake, provision and utilisation of existing facilities and Government policy and resources in determining the priorities of the facilities to be implemented.

5. Consultation with District Council

- 5.1 During the Stage 3 Public Engagement for the Relocation of STSTW to Caverns, DSD has consulted Health and Environment Committee (HEC) of Sha Tin District Council (STDC) on March 2016 regarding the results and recommendations of the EIA and the latest progress of the project.
- 5.2 FHB and FEHD consulted the HEC of STDC on 12.5.2016 regarding the proposed columbarium and garden of remembrance development in Shek Mun (Item B) and the initial recommendations of the TIA for the provision of about 40,000 niches at the proposed site. The HEC gave support to the proposed columbarium and garden of remembrance development.
- 5.3 The Development and Housing Committee (DHC) of STDC has been consulted on 3.11.2016 regarding the proposed amendment to the Sha Tin OZP No. S/ST/32 as mentioned in paragraph 3. A summary of the discussion at the meeting is at **Appendix 9**.
- 5.4 DHC members generally supported the proposed STCSTW (Item A), the proposed columbarium and garden of remembrance development (Item B) and the rezoning of the Olympic Stables site (Item C). However, there were concerns on the possible adverse air and noise impacts during the construction stage of STCSTW, future use of the existing STSTW site after relocation and the traffic impact of the columbarium development. There were also suggestions that HKJC should provide more sports and community facilities and the Government should compensate the loss of the “G/IC” site due to the rezoning of Olympic Stables.
- 5.5 DHC members in general did not support the proposed public housing development at On Muk Street, Shek Mun (Item D). They were concerned that existing transport infrastructures and community facilities were insufficient to support additional housing development. They also commented that the proposal was not compatible with the waterfront character in Sha Tin. Some DHC members raised concerns on the implementation of open space and other community facilities and urged the Government to implement the planned facilities before proposing more housing developments in Sha Tin.
- 5.6 In response, the assessments in paragraph 4 above have demonstrated that the proposed developments are technically feasible and the provision of open space and G/IC facilities are generally adequate to meet the demand of the planned population.

6. Proposed Amendments to the Approved Sha Tin OZP

The proposed amendments to the approved OZP are shown on the draft Amendment Plan No. S/ST/32A at **Annex B**. Details of the amendment items are as follows:

- (a) **Item A1 (Site Area: 23.45 ha) (Plans 1a and 2a)**
Rezoning of a site at A Kung Kok from “GB” to “GB (1)” to facilitate the development of the STCSTW.
- (b) **Item A2 (Site Area: 2.72 ha) (Plans 1a and 2a)**
Rezoning of a site at A Kung Kok Street and Mui Tsz Lam Road from “GB” to “OU(STW)” to accommodate facilities to support the operation of STCSTW.
- (c) **Item A3 (Site Area: 0.31 ha) (Plans 1a and 2a)**
Rezoning of a site at Mui Tsz Lam Road from “GB” to “OU(STW)” to accommodate facilities to support the operation of STCSTW.
- (d) **Item A4 (Site Area: 0.11 ha) (Plans 1a and 2a)**
Rezoning of a site at the junction of A Kung Kok Street and Mui Tsz Lam Road from “GB” to “Road” to reflect its existing use and site condition.
- (e) **Item B1 (Site Area: 2.28 ha) (Plans 1b and 2b)**
Rezoning of a site at On Hing Lane, Shek Mun from “I” to “OU(Columbarium and Garden of Remembrance)” to facilitate the columbarium and garden of remembrance development
- (f) **Item B2 (Site Area: 0.23 ha) (Plans 1b and 2b)**
Rezoning of a site at On Hing Lane, Shek Mun from “GB” to “OU(Columbarium and Garden of Remembrance)” to facilitate the columbarium and garden of remembrance development.
- (g) **Item B3 (Site Area: 0.18 ha) (Plans 1b and 2b)**
Rezoning of a site at On Hing Lane, Shek Mun from “OU(RTS)” to “OU(Columbarium and Garden of Remembrance)” to facilitate the columbarium and garden of remembrance development.
- (h) **Item B4 (Site Area: 0.26 ha) (Plans 1b and 2b)**
Rezoning of a strip of land along the eastern fringe of the Sha Tin Refuse Transfer Station from “I” to “OU(RTS)” to reflect its the existing use.
- (i) **Item B5 (Site Area: 0.23 ha) (Plans 1b and 2b)**
Rezoning of a strip of land at On Hing Lane, Shek Mun from “I” to “GB” to reflect its existing status.
- (j) **Item C (Site Area: 4.76 ha) (Plans 1b and 2c)**
Rezoning of the Olympic Stables from “G/IC” to “OU(Race Course)” to reflect the current use and function of the site

- (k) Item D (Site Area: 0.43 ha) (Plans 1b and 2b)

Rezoning of a site at On Muk Street, Shek Mun from “O” to “R(A)6” to facilitate public housing development with stipulation of maximum BH of 110mPD.

7. Proposed Amendment to the Notes of the Approved Sha Tin OZP

A copy of the revised Notes is attached at **Annex C** with the proposed amendments highlighted (with addition in bold and italics and deletions ~~crossed-out~~) for Member’s consideration. The major amendments include:

“GB”

- (a) As mentioned in paragraph 3.5, incorporation of ‘Underground Sewage Treatment Works (on land designated “GB(1)” only)’ as a Column 1 use of the zone.

“OU(Race Course)”

- (b) Incorporation of ‘Private Club’ and ‘Race Course’ as Column 1 uses of the zone.
- (c) Incorporation of ‘Government Use’, ‘Place of Recreation, Sports or Culture’, ‘Public Utility Installation’ and ‘Utility Installation for Private Project’ as Column 2 uses of the zone.

“R(A)6”

- (d) As mentioned in paragraph 3.12, incorporation of a new sub-zone of “R(A)6” with the stipulation of a maximum GFA of 26 240m².

8. Explanatory Statement of the OZP

The ES of the OZP has been revised to take into account the proposed amendments as mentioned in paragraphs 6 and 7 above and to reflect the latest status and planning circumstances of the OZP. A copy of the revised ES is attached at **Annex D** (with addition in bold and italics).

9. Plan Number

Upon gazetting, the draft OZP will be renumbered as S/ST/33.

10. Consultation

Department Consultation

- 10.1 Relevant B/Ds were consulted on the proposed amendments. Comments of Secretary for Food and Health, C for T, Director of Housing, Director of Leisure and Cultural Services, DO(ST), Commissioner for Sports, Home Affairs Bureau,

CTP/UD&L, PlanD, Chief Engineer/Sewerage Project, DSD, DEP, Director of Food and Environmental Hygiene and Head of Geotechnical Engineering Office, Civil Engineering and Development Department have been incorporated into the above paragraphs, where appropriate.

10.2 Apart from the above, the following B/Ds have no objection to/no comment on the proposed amendments:

- (a) Development Bureau;
- (b) Secretary for Home Affairs;
- (c) Secretary for Education;
- (d) Director of Electrical and Mechanical Services
- (e) Director of Agriculture, Fisheries and Conservation;
- (f) District Lands Officer, Sha Tin;
- (g) Project Manager/New Territories East, Civil Engineering and Development;
- (h) Director of Fire Services;
- (i) Chief Highway Engineer/New Territories East, Highways Department;
- (j) Chief Engineer/Construction, Water Supplies Department;
- (k) Director of Health;
- (l) Chief Engineer/Mainland South, Drainage Services Department;
- (m) Director of Social Welfare; and
- (n) Chief Building Surveyor/New Territories 2 & Railway, Buildings Department.

Public Consultation

10.3 If the proposed amendments are agreed by the Committee, the draft OZP and its Notes will be suitable for exhibition under section 5 of the Ordinance. Members of the public can submit representations on the OZP to the Board during the two-month statutory public inspection period.

11. Decision Sought

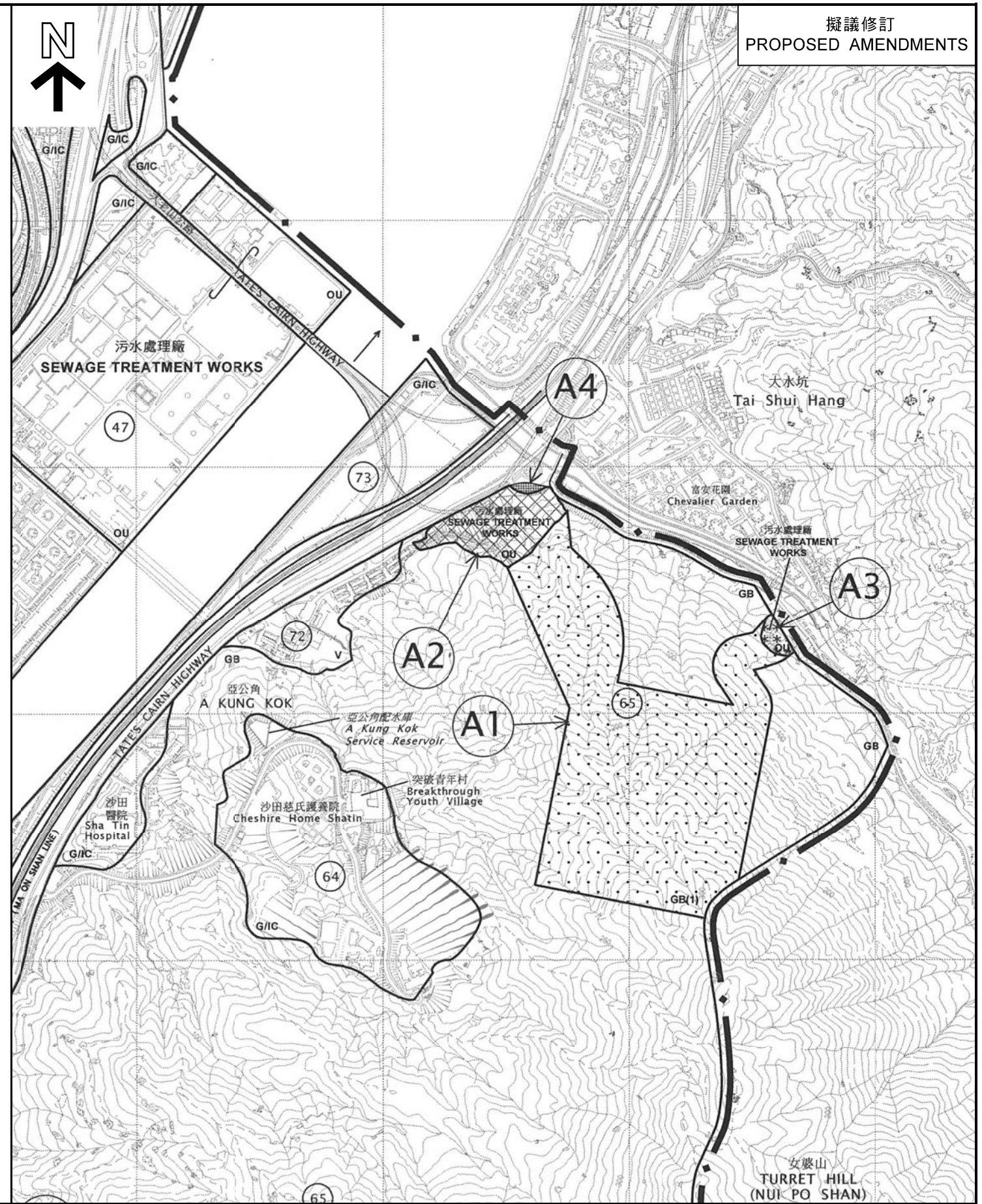
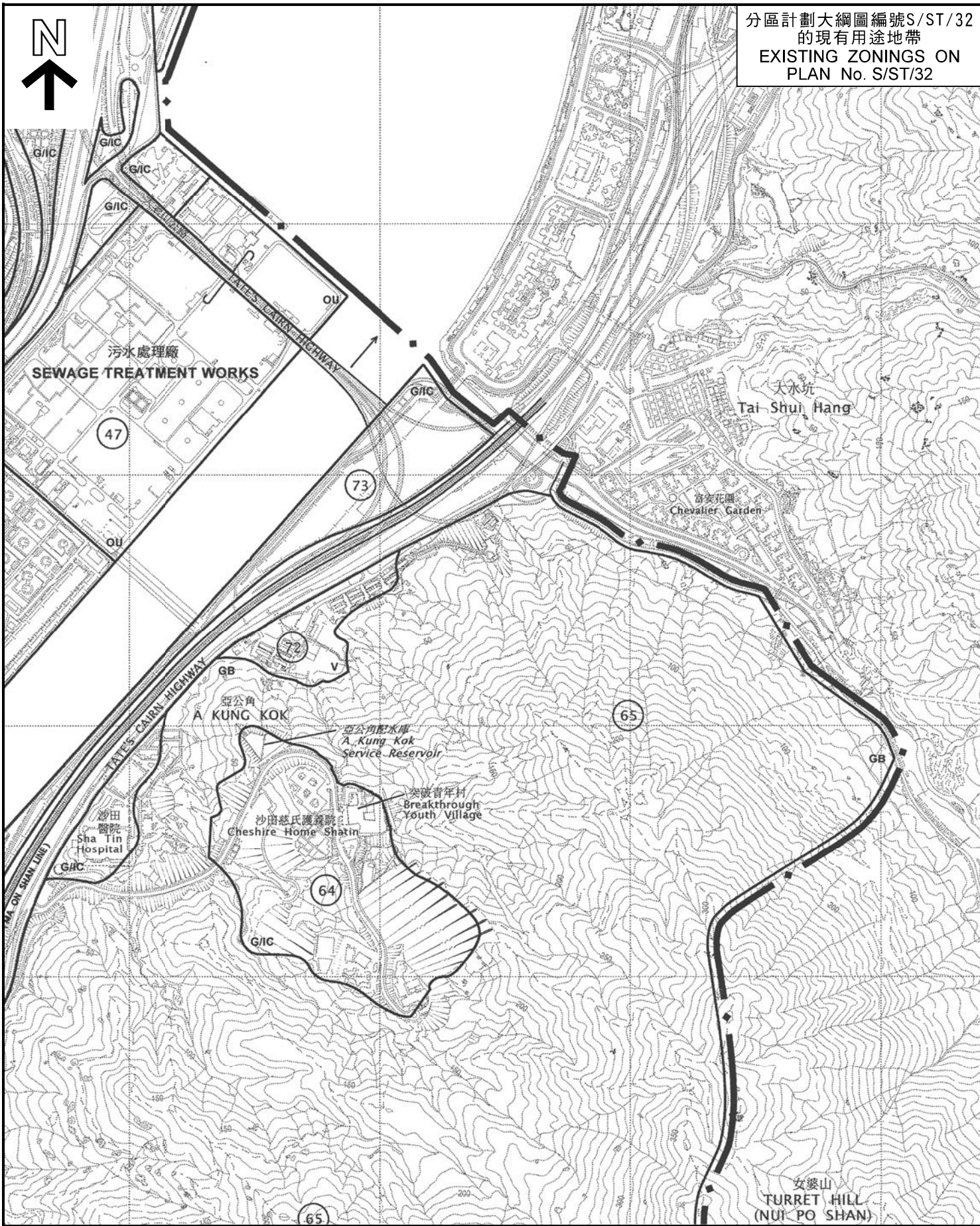
Members are invited to:

- (a) agree to the proposed amendments to the approved Sha Tin OZP No. S/ST/32 as mentioned in paragraphs 6 and 7 above;
- (b) agree that the amendment Plan No. S/ST/32A at **Annex B** (to be renumbered to S/ST/33 upon gazetting) and its Notes at **Annex C** are suitable for exhibition for public inspection under section 5 of the Ordinance;
- (c) adopt the revised ES at **Annex D** as an expression of the planning intentions and objectives of the Board for various land use zones on the draft Sha Tin OZP; and
- (d) agree that the revised ES at **Annex D** is suitable for exhibition for public inspection together with the draft OZP No. S/ST/32A (to be renumbered to S/ST/33 upon gazetting).

12. **Attachments**

Plans 1a to 1b	OZP Comparisons
Plans 2a to 2c	Site Plan of Amendment Items A to D
Plans 3a to 3c	Aerial Photos of Amendment Items A to D
Plans 4a to 4i	Site Photos of Amendment Items A to D
Drawing 1	Proposed Sha Tin Cavern Sewage Treatment Works – Main and Secondary Portal Layout Plan
Drawing 2	Proposed Sha Tin Cavern Sewage Treatment Works – Main and Secondary Portal Master Plan
Drawing 3	Indicative Development Scheme of the Proposed Columbarium and Garden of Remembrance at On Hing Lane, Shek Mun.
Drawings 4, 4a to 4d	Viewpoints and Photomontage of the Proposed Columbarium and Garden of Remembrance at On Hing Lane, Shek Mun.
Drawing 5	Indicative Development Scheme of Proposed Public Housing Development at On Muk Street, Shek Mun
Drawings 6, 6a to 6e	Viewpoints and Photomontages of the Proposed Public Housing Development at On Muk Street, Shek Mun
Annex A	Approved Sha Tin OZP No. S/ST/32 (A-3 size)
Annex B	Draft Sha Tin OZP No. S/ST/32A
Annex C	Notes of the draft Sha Tin OZP No. S/ST/32A
Annex D	Explanatory Statement of the draft Sha Tin OZP No. S/ST/32A
Appendix 1	Environmental Impact Assessment - Executive Summary provided by DSD
Appendix 2	Brief Summary of Traffic Impact Assessment for the Proposed Sha Tin Cavern Sewage Treatment Works provided by DSD
Appendix 3	Brief Summary of Traffic Impact Assessment for the Proposed Columbarium and Garden of Remembrance provided by FHB/FEHD
Appendix 4	Visual Appraisal Report of the Proposed Columbarium and Garden of Remembrance provided by FHB and FEHD
Appendix 5	Brief Summary of Traffic Impact Assessment for the Proposed Public Housing Development at On Muk Street, Shek Mun provided by HD
Appendix 6	Visual Appraisal Report Proposed Public Housing Development at On Muk Street, Shek Mun provided by HD
Appendix 7	Air Ventilation Assessment by Expert Evaluation
Appendix 8	Provision of Open Space and Major G/IC facilities in the Sha Tin OZP
Appendix 9	Summary of Consultation with DHC of STDC on 3.11.2016

**PLANNING DEPARTMENT
DECEMBER 2016**



本摘要圖於2016年10月26日擬備，
所根據的資料為分區計劃大綱圖編號
S/ST/32及S/ST/32A

EXTRACT PLAN PREPARED ON 26.10.2016
BASED ON OUTLINE ZONING PLANS No.
S/ST/32 & S/ST/32A

位置圖 - 項目A1、A2、A3及A4
LOCATION PLAN - ITEMS A1, A2, A3 AND A4

在沙田分區計劃大綱核准圖編號S/ST/32作出的擬議修訂

PROPOSED AMENDMENTS TO THE APPROVED SHA TIN OUTLINE ZONING PLAN No. S/ST/32

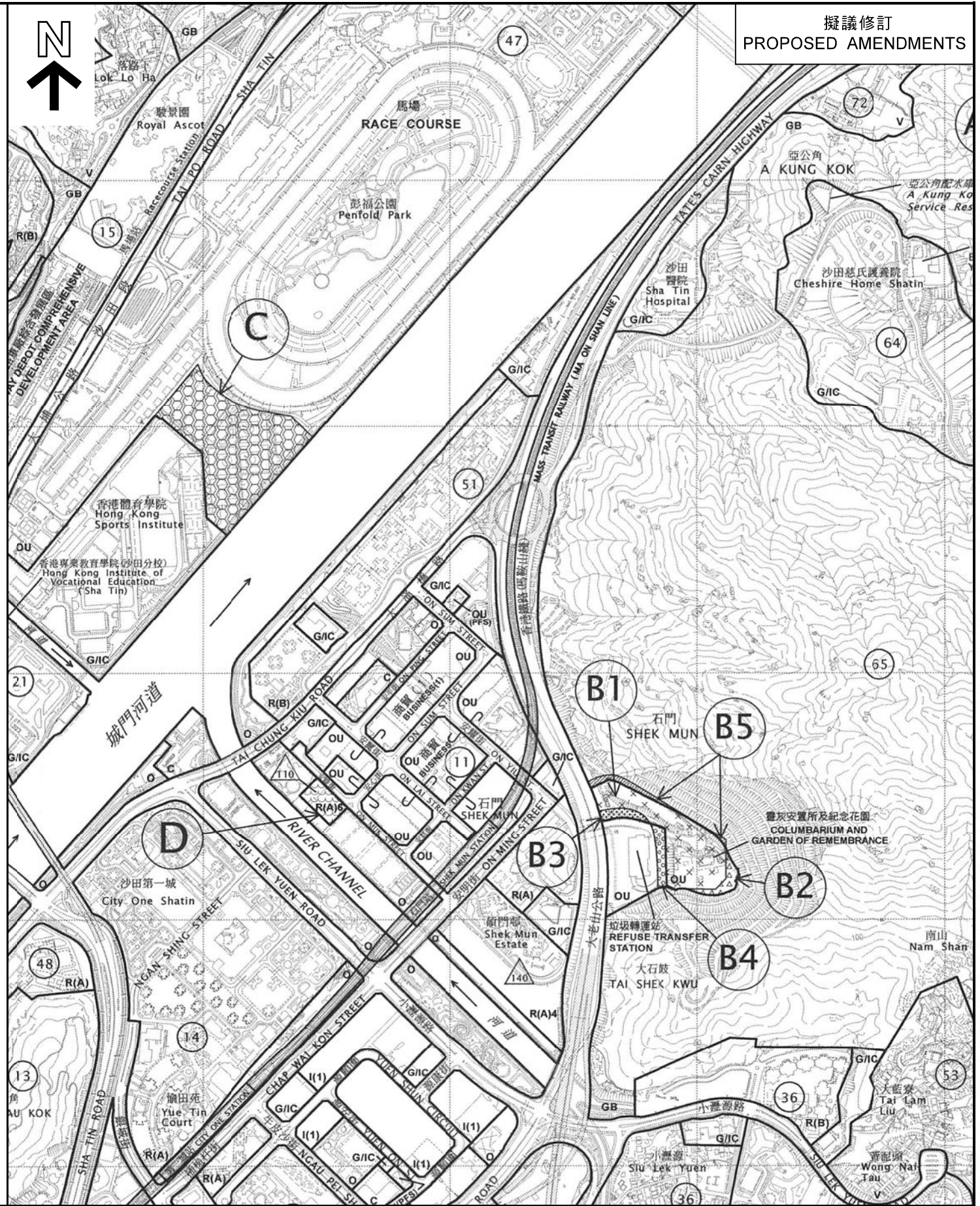
米 100 0 200 400 600 800 1 000 METRES
SCALE 1:10 000 比例尺

規 劃 署
PLANNING DEPARTMENT



參考編號
REFERENCE No.
M/ST/16/51

圖 PLAN
1a



本摘要圖於2016年10月26日擬備，
所根據的資料為分區計劃大綱圖編號
S/ST/32及S/ST/32A

EXTRACT PLAN PREPARED ON 26.10.2016
BASED ON OUTLINE ZONING PLANS No.
S/ST/32 & S/ST/32A

位置圖 - 項目B1、B2、B3、B4、B5、C及D
LOCATION PLAN - ITEMS B1, B2, B3, B4, B5, C AND D

在沙田分區計劃大綱核准圖編號S/ST/32作出的擬議修訂

PROPOSED AMENDMENTS TO THE APPROVED SHA TIN OUTLINE ZONING PLAN No. S/ST/32

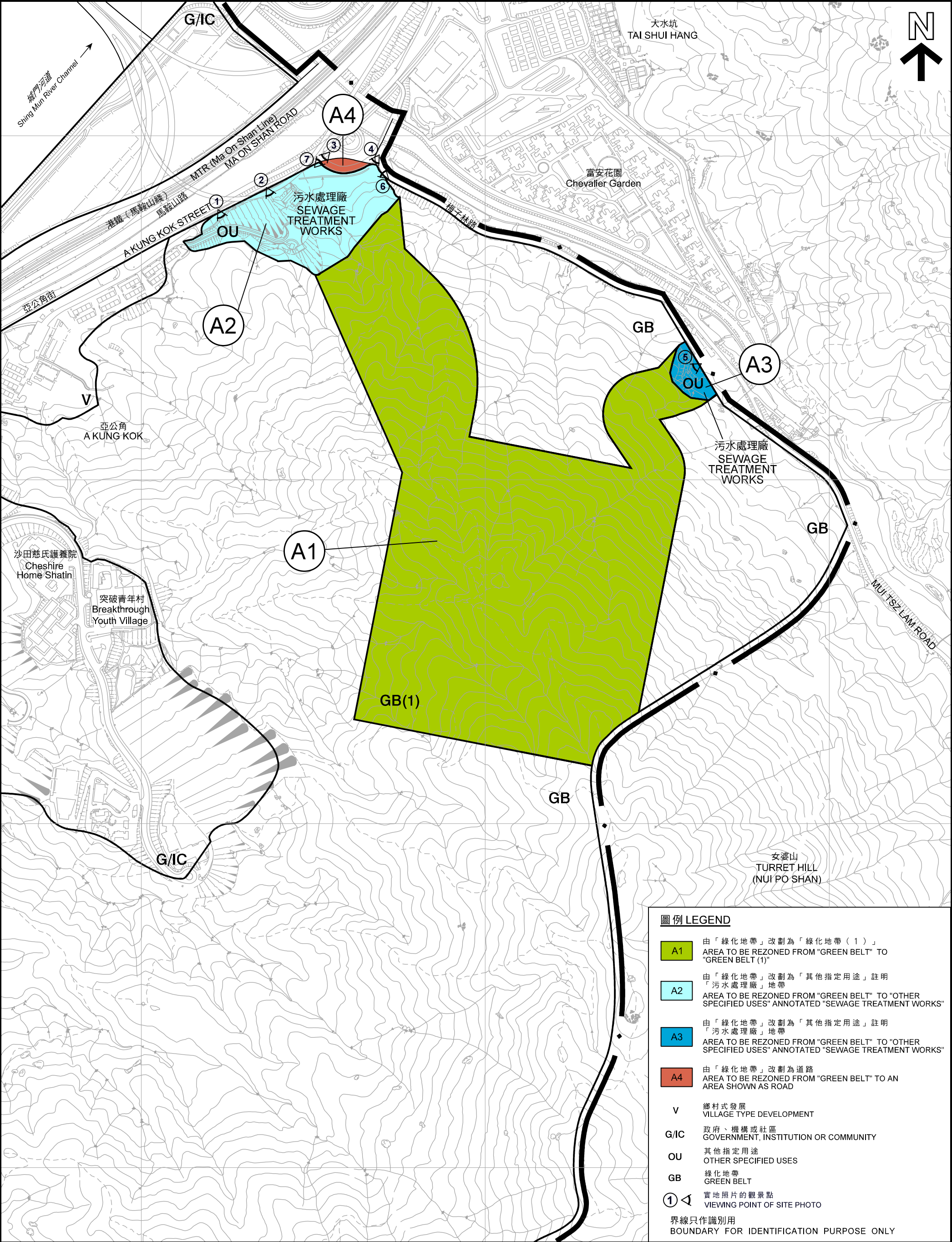
米 100 0 200 400 600 800 1 000 METRES
SCALE 1 : 10 000 比例尺

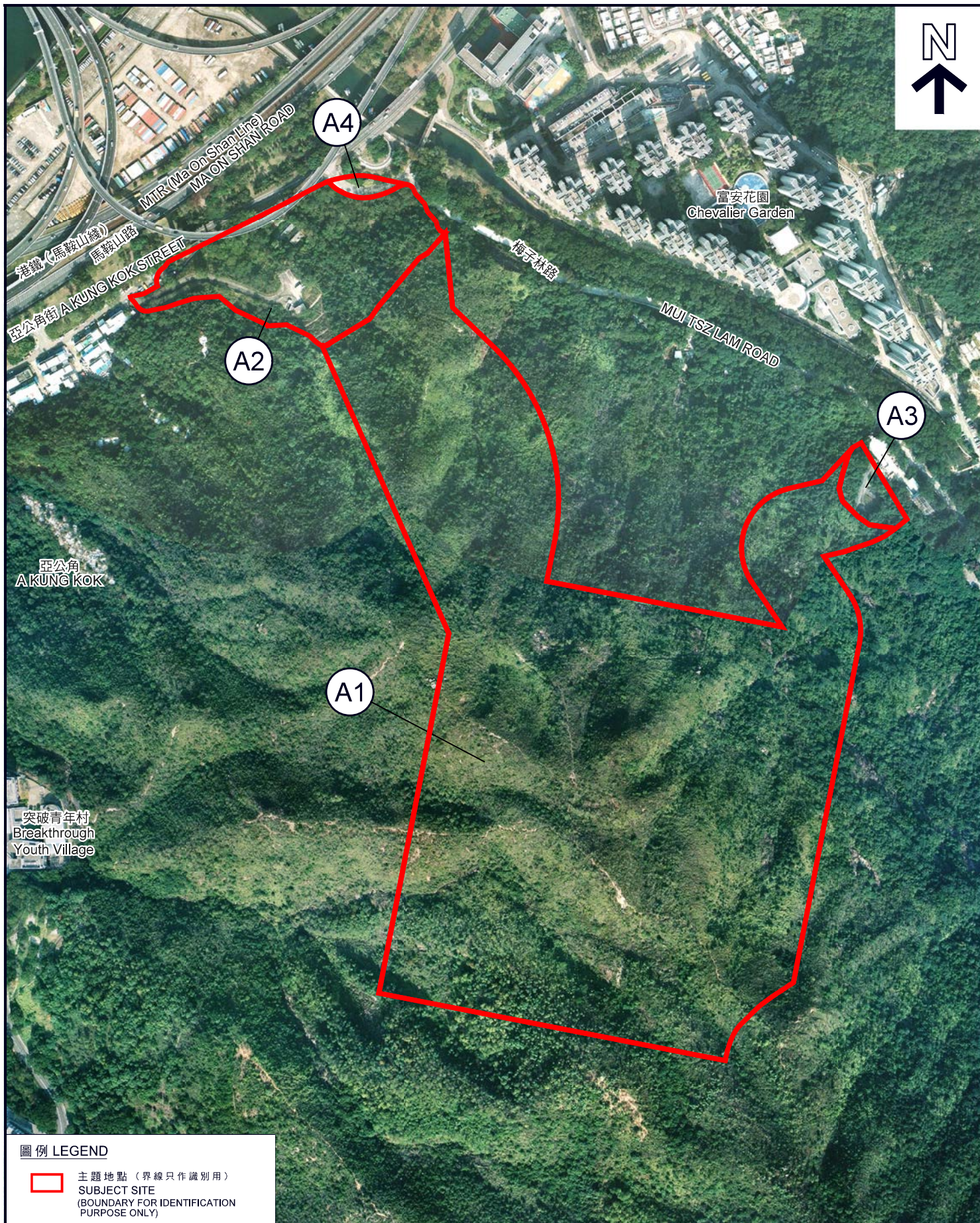
規 劃 署
PLANNING DEPARTMENT



參考編號
REFERENCE No.
M/ST/16/51

圖 PLAN
1b





圖例 LEGEND

- 主題地點 (界線只作識別用)
SUBJECT SITE
(BOUNDARY FOR IDENTIFICATION
PURPOSE ONLY)

本圖於2016年7月19日擬備，
所根據的資料為於2016年1月25日
拍得的航攝照片編號CS55827
及CS56114
PLAN PREPARED ON 19.7.2016
BASED ON AERIAL PHOTOS No. CS55827
AND CS56114 TAKEN ON 25.1.2016

航攝照片 - 項目A1、A2、A3及A4
AERIAL PHOTO - ITEMS A1, A2, A3 AND A4

在沙田分區計劃大綱核准圖編號S/ST/32
作出的擬議修訂
PROPOSED AMENDMENTS TO THE APPROVED
SHA TIN OUTLINE ZONING PLAN No. S/ST/32

規劃署
PLANNING
DEPARTMENT



參考編號
REFERENCE No.
M/ST/16/51

圖 PLAN
3a



圖例 LEGEND

- 主題地點 (界線只作識別用)
SUBJECT SITE
(BOUNDARY FOR IDENTIFICATION
PURPOSE ONLY)

航攝照片 - 項目B1、B2、B3、B4、B5及D AERIAL PHOTO - ITEMS B1, B2, B3, B4, B5 AND D

在沙田分區計劃大綱核准圖編號S/ST/32
作出的擬議修訂

PROPOSED AMENDMENTS TO THE APPROVED
SHA TIN OUTLINE ZONING PLAN No. S/ST/32

規劃署
PLANNING
DEPARTMENT



參考編號
REFERENCE No.
M/ST/16/51

圖 PLAN
3b

本圖於2016年10月26日擬備，
所根據的資料為於2016年1月25日
拍得的航攝照片編號CS63887及
CS63888
PLAN PREPARED ON 26.10.2016
BASED ON AERIAL PHOTOS No.
CS63887 AND CS63888
TAKEN ON 25.1.2016



圖例 LEGEND

- 主題地點 (界線只作識別用)
SUBJECT SITE
(BOUNDARY FOR IDENTIFICATION
PURPOSE ONLY)

本圖於2016年10月26日擬備，
所根據的資料為於2016年1月25日
拍得的航攝照片編號CS63393
PLAN PREPARED ON 26.10.2016
BASED ON AERIAL PHOTO No. CS63393
TAKEN ON 25.1.2016

航攝照片 - 項目C AERIAL PHOTO - ITEM C

在沙田分區計劃大綱核准圖編號S/ST/32
作出的擬議修訂
PROPOSED AMENDMENTS TO THE APPROVED
SHA TIN OUTLINE ZONING PLAN No. S/ST/32

規劃署
PLANNING
DEPARTMENT



參考編號
REFERENCE No.
M/ST/16/51

圖 PLAN
3c



界線只作識別用
BOUNDARY FOR IDENTIFICATION PURPOSE ONLY

本圖於2016年7月19日擬備，所根據的資料為攝於2016年5月25日的實地照片
PLAN PREPARED ON 19.7.2016 BASED ON SITE PHOTOS TAKEN ON 25.5.2016

實地照片 - 項目A2
SITE PHOTO - ITEM A2
在沙田分區計劃大綱核准圖編號S/ST/32作出的擬議修訂
PROPOSED AMENDMENTS TO THE APPROVED SHA TIN OUTLINE ZONING PLAN No. S/ST/32

規 劃 署
PLANNING
DEPARTMENT



參考編號
REFERENCE No.
M/ST/16/51

圖 PLAN
4a

5



本圖於2016年7月19日擬備，所根據的資料為攝於2016年5月25日的實地照片
PLAN PREPARED ON 19.7.2016 BASED ON SITE PHOTO TAKEN ON 25.5.2016

實地照片 - 項目A3
SITE PHOTO - ITEM A3

在沙田分區計劃大綱核准圖編號S/ST/32
作出的擬議修訂
PROPOSED AMENDMENTS TO THE APPROVED
SHA TIN OUTLINE ZONING PLAN No. S/ST/32

規 劃 署
PLANNING
DEPARTMENT



參考編號
REFERENCE No.
M/ST/16/51

圖 PLAN
4b



本圖於2016年7月19日擬備，所根據的資料為攝於2016年5月25日的實地照片
 PLAN PREPARED ON 19.7.2016 BASED ON SITE PHOTOS TAKEN ON 25.5.2016

實地照片 - 項目A4
 SITE PHOTO - ITEM A4
 在沙田分區計劃大綱核准圖編號S/ST/32作出的擬議修訂
 PROPOSED AMENDMENTS TO THE APPROVED SHA TIN OUTLINE ZONING PLAN No. S/ST/32

規劃署
 PLANNING
 DEPARTMENT



參考編號
 REFERENCE No.
 M/ST/16/51

圖 PLAN
 4c



界線只作識別用
BOUNDARY FOR IDENTIFICATION PURPOSE ONLY

本圖於2016年7月19日擬備，所根據的資料為攝於2016年5月18日的實地照片
PLAN PREPARED ON 19.7.2016 BASED ON SITE PHOTOS TAKEN ON 18.5.2016

實地照片 - 項目B1
SITE PHOTO - ITEM B1
在沙田分區計劃大綱核准圖編號S/ST/32作出的擬議修訂
PROPOSED AMENDMENTS TO THE APPROVED SHA TIN OUTLINE ZONING PLAN No. S/ST/32

規劃署
PLANNING
DEPARTMENT



參考編號
REFERENCE No.
M/ST/16/51

圖 PLAN
4d

10



項目B1

ITEM B1

11



項目B1

ITEM B1

本圖於2016年7月19日擬備，所根據的資料為攝於2016年5月18日的實地照片
PLAN PREPARED ON 19.7.2016 BASED ON SITE PHOTOS TAKEN ON 18.5.2016

實地照片 - 項目B1
SITE PHOTO - ITEM B1

在沙田分區計劃大綱核准圖編號S/ST/32作出的擬議修訂
PROPOSED AMENDMENTS TO THE APPROVED SHA TIN OUTLINE ZONING PLAN No. S/ST/32

規劃署
PLANNING
DEPARTMENT



參考編號
REFERENCE No.
M/ST/16/51

圖 PLAN
4e



界線只作識別用

BOUNDARY FOR IDENTIFICATION PURPOSE ONLY

本圖於2016年7月19日擬備，所根據的資料為攝於2016年5月18日的實地照片
PLAN PREPARED ON 19.7.2016 BASED ON SITE PHOTOS TAKEN ON 18.5.2016

實地照片 - 項目B2及B3 SITE PHOTO - ITEMS B2 AND B3

在沙田分區計劃大綱核准圖編號S/ST/32
作出的擬議修訂
PROPOSED AMENDMENTS TO THE APPROVED
SHA TIN OUTLINE ZONING PLAN No. S/ST/32

規 劃 署
PLANNING
DEPARTMENT



參考編號
REFERENCE No.
M/ST/16/51

圖 PLAN
4f



界線只作識別用
BOUNDARY FOR IDENTIFICATION PURPOSE ONLY

實地照片 - 項目B4及B5
SITE PHOTO - ITEMS B4 AND B5

在沙田分區計劃大綱核准圖編號S/ST/32
作出的擬議修訂
PROPOSED AMENDMENTS TO THE APPROVED
SHA TIN OUTLINE ZONING PLAN No. S/ST/32

規劃署
PLANNING
DEPARTMENT



參考編號
REFERENCE No.
M/ST/16/51

圖 PLAN
4g

本圖於2016年7月19日擬備，所根據
的資料為攝於2016年5月18日
的實地照片
PLAN PREPARED ON 19.7.2016 BASED ON
SITE PHOTOS TAKEN ON
18.5.2016



本圖於2016年10月26日擬備，所根據的資料為攝於2016年5月25日的實地照片
 PLAN PREPARED ON 26.10.2016 BASED ON SITE PHOTOS TAKEN ON 25.5.2016

實地照片 - 項目C
 SITE PHOTO - ITEM C
 在沙田分區計劃大綱核准圖編號S/ST/32作出的擬議修訂
 PROPOSED AMENDMENTS TO THE APPROVED SHA TIN OUTLINE ZONING PLAN No. S/ST/32

規 劃 署
 PLANNING
 DEPARTMENT



參考編號
 REFERENCE No.
 M/ST/16/51

圖 PLAN
 4h



本圖於2016年10月26日擬備，所根據的資料為攝於2016年5月25日的實地照片
 PLAN PREPARED ON 26.10.2016 BASED ON SITE PHOTOS TAKEN ON 25.5.2016

實地照片 - 項目D
 SITE PHOTO - ITEM D
 在沙田分區計劃大綱核准圖編號S/ST/32作出的擬議修訂
 PROPOSED AMENDMENTS TO THE APPROVED SHA TIN OUTLINE ZONING PLAN No. S/ST/32

規劃署
 PLANNING
 DEPARTMENT



參考編號
 REFERENCE No.
 M/ST/16/51

圖 PLAN
 4i



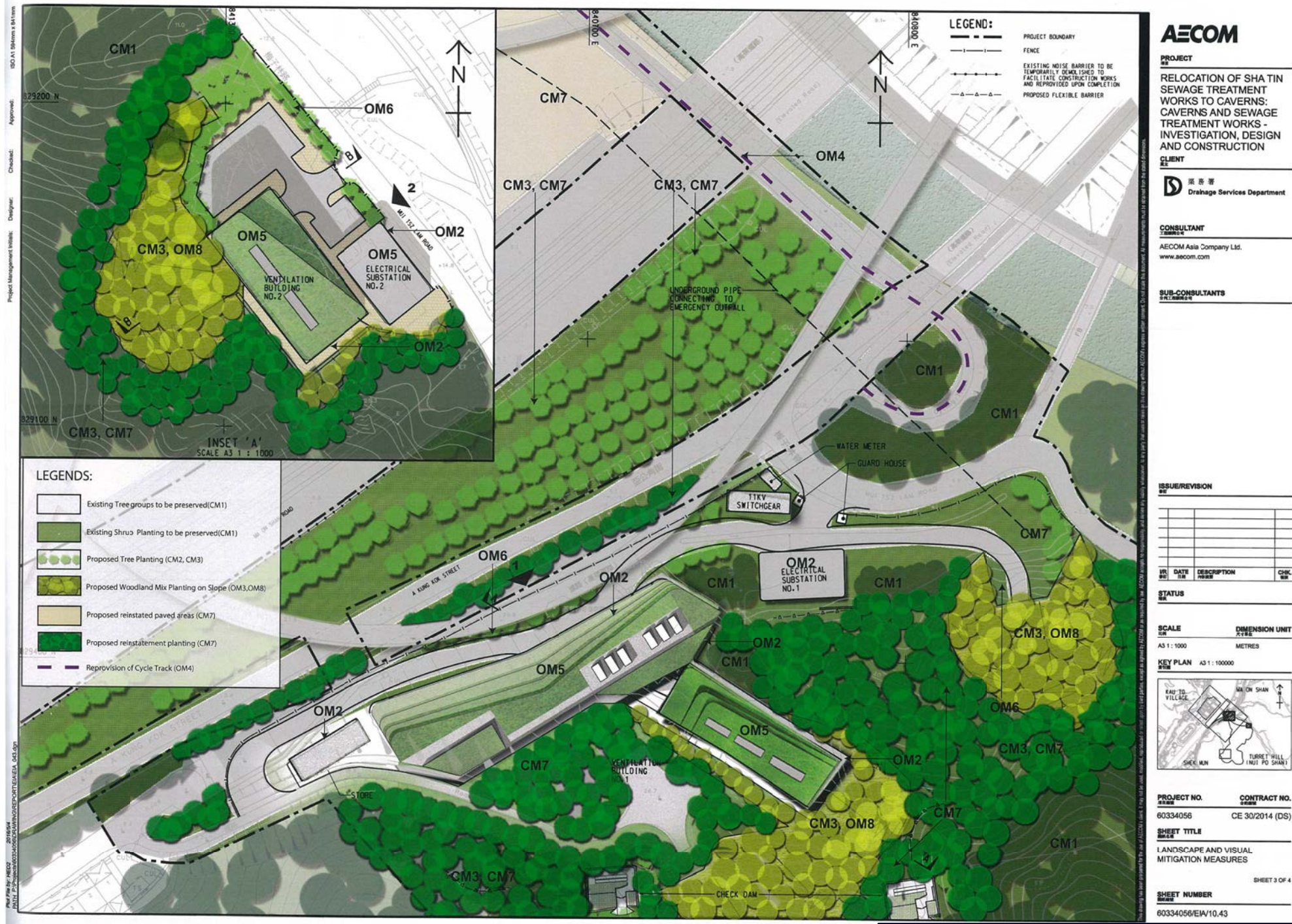




Figure 1- Viewpoints from popular pedestrian nodes accessible by the public

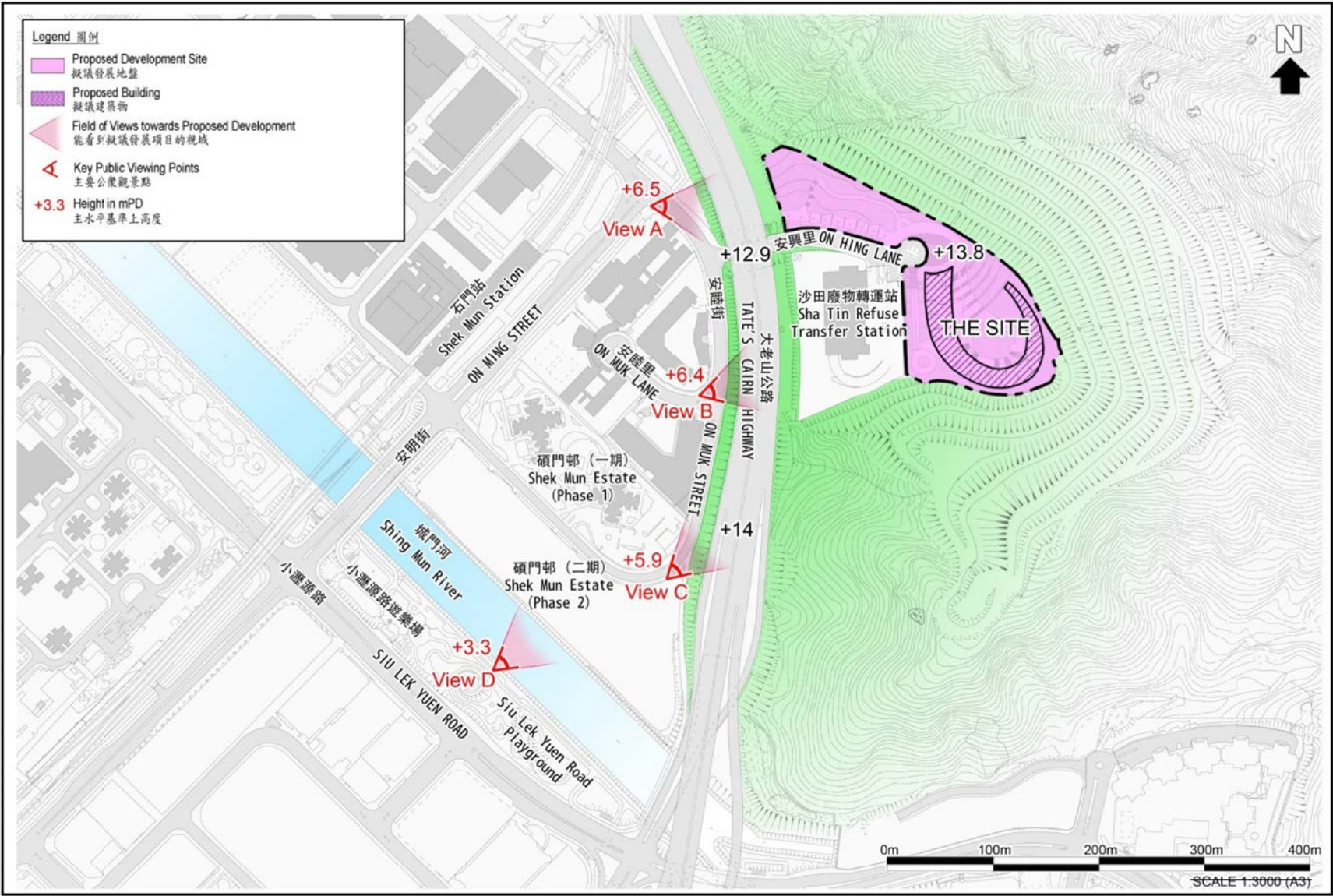


Figure 2

View A: Viewed from Recreational Cycle Track on On Muk Street



Without project



With project

The proposed columbarium and garden of remembrance development is blocked by the elevated Tate's Cairn Highway and is obscured by tall trees and dense vegetation in the foreground.

Figure 3

View B: Viewed from Hong Kong Baptist University and International Christian School



Without project



With project

The proposed columbarium and garden of remembrance development is totally concealed by the tall trees and dense vegetation along the western side of the elevated Tate's Cairn Highway.

Figure 4

View C: Viewed from Shek Mun Estate Phase 1 and Phase 2



Without project



With project

The proposed columbarium and garden of remembrance development is screened off by the tall trees and slope with dense vegetation along the western side of the elevated Tate's Cairn Highway.

Figure 5

View D: Viewed from recreational Cycling Arena on Siu Lek Yuen Road Playground

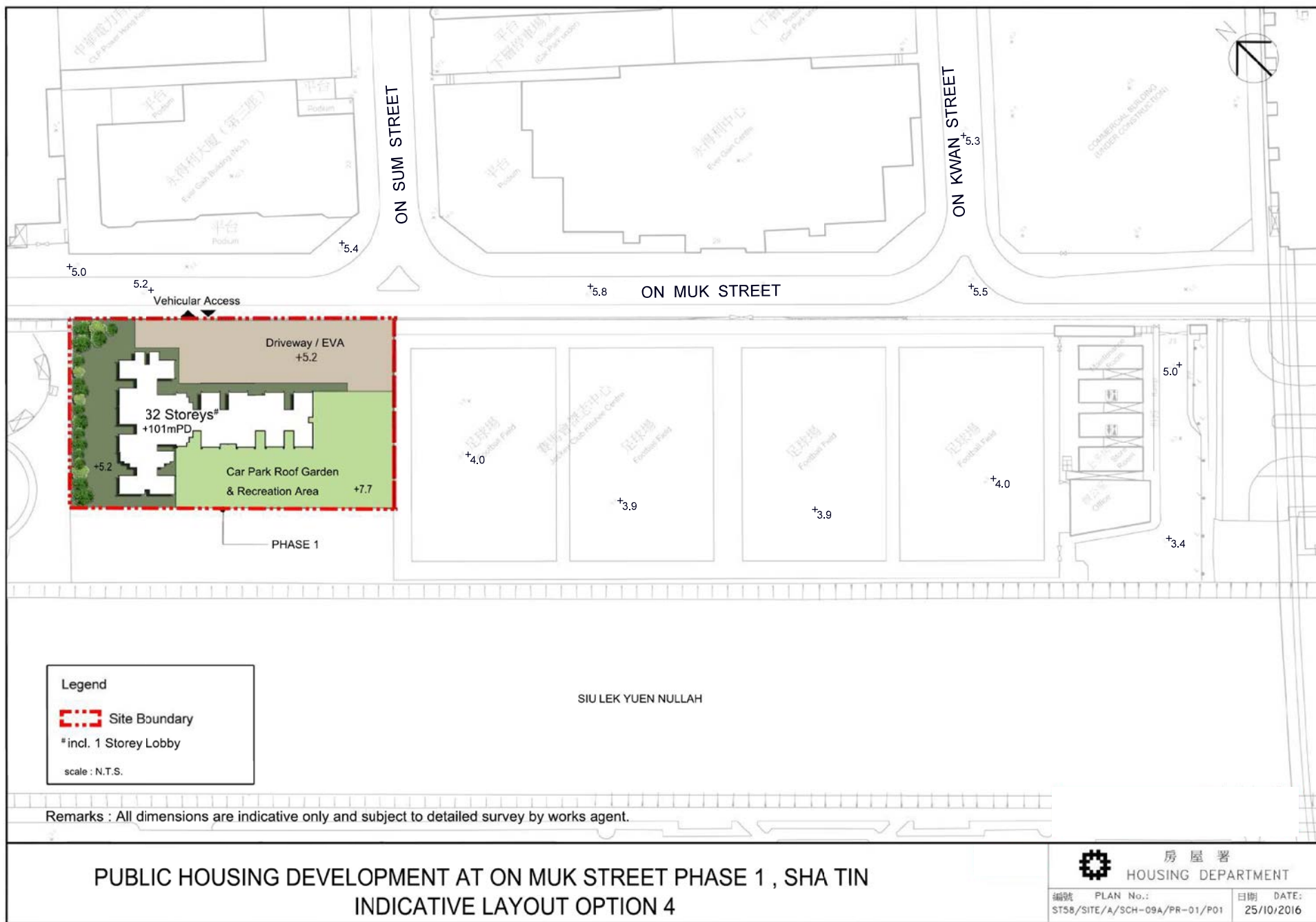


Without project



With project

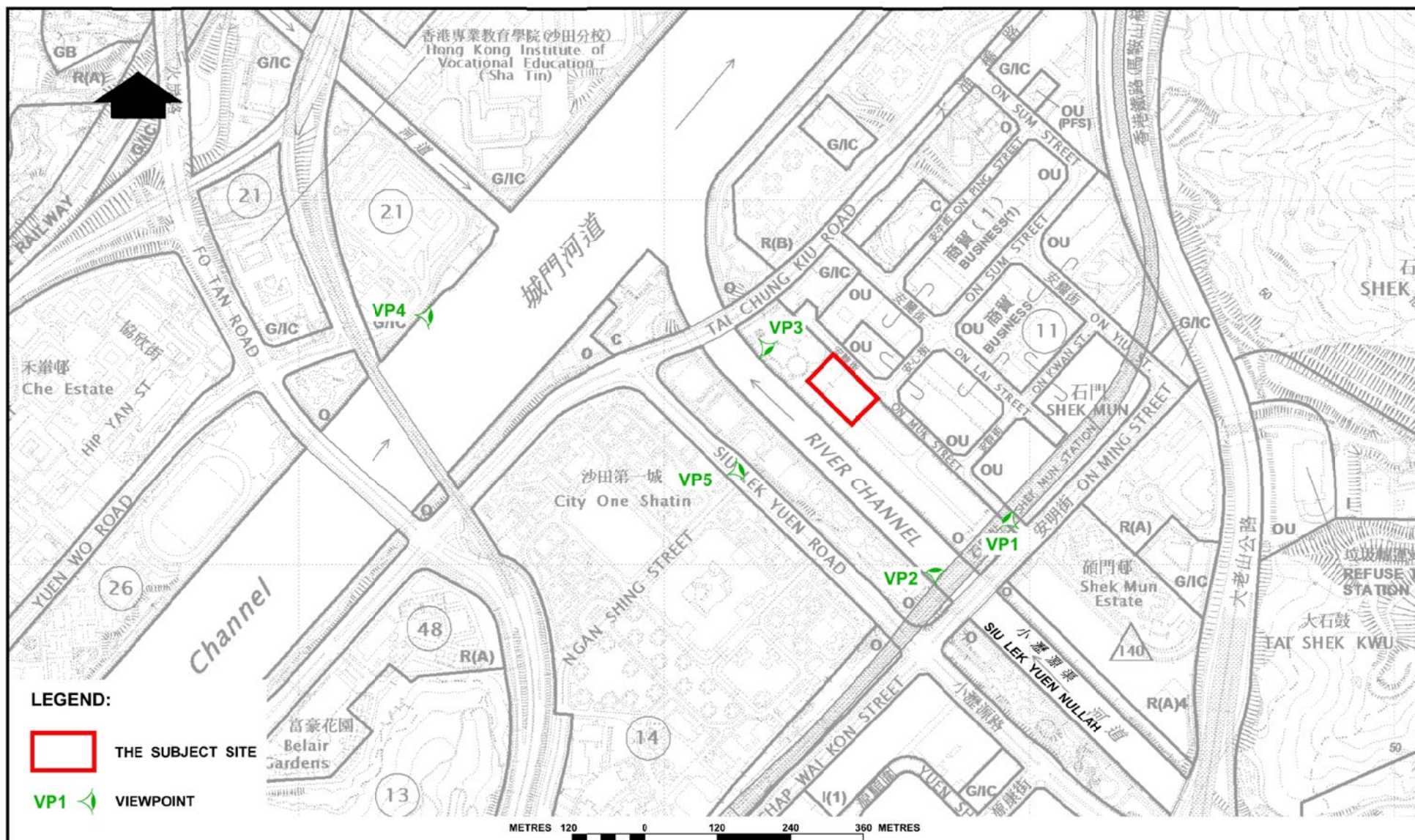
The proposed columbarium and Garden of Remembrance development is visually obstructed by the Kin Shek House and Mei Shek House of Shek Mun Estate Phase 1 and will be fully blocked after the completion of Shek Mun Estate Phase 2.



參考編號
REFERENCE No.

M/ST/16/51

繪圖 DRAWING 5



ON MUK STREET, SHEK MUN LOCATION OF FIVE PROPOSED VIEWPOINTS



HOUSING DEPARTMENT
PLANNING SECTION

Figure 1

DATE :
27. 10. 2016

BASE EXTRACTED FROM OZP No. S/ST/32

參考編號
REFERENCE No.

M/ST/16/51

繪圖 DRAWING 6

16_0957ST

Figure 2: Viewpoint 1 – Photomontage viewing from On Muk Street near MTR Shek Mun Station Exit A at Street Level

Existing Condition without Proposed Development



Photomontage with Proposed Development



參考編號

REFERENCE No.

M/ST/16/51

繪圖DRAWING A-6a

Figure 3: Viewpoint 2 – Photomontage viewing from Siu Lek Yuen Road Playground near the MTR Ma On Shan Line Railway Track

Existing Condition without Proposed Development



Photomontage with Proposed Development



參考編號

REFERENCE No.

M/ST/16/51

繪圖DRAWING A-6b

Figure 4: Viewpoint 3 – Photomontage viewing from On Muk Street Garden

Existing Condition without Proposed Development



Photomontage with Proposed Development



Figure 5: Viewpoint 4 – Photomontage viewing from the Cycle Track near Sha Tin Rowing Centre

Existing Condition without Proposed Development



Photomontage with Proposed Development

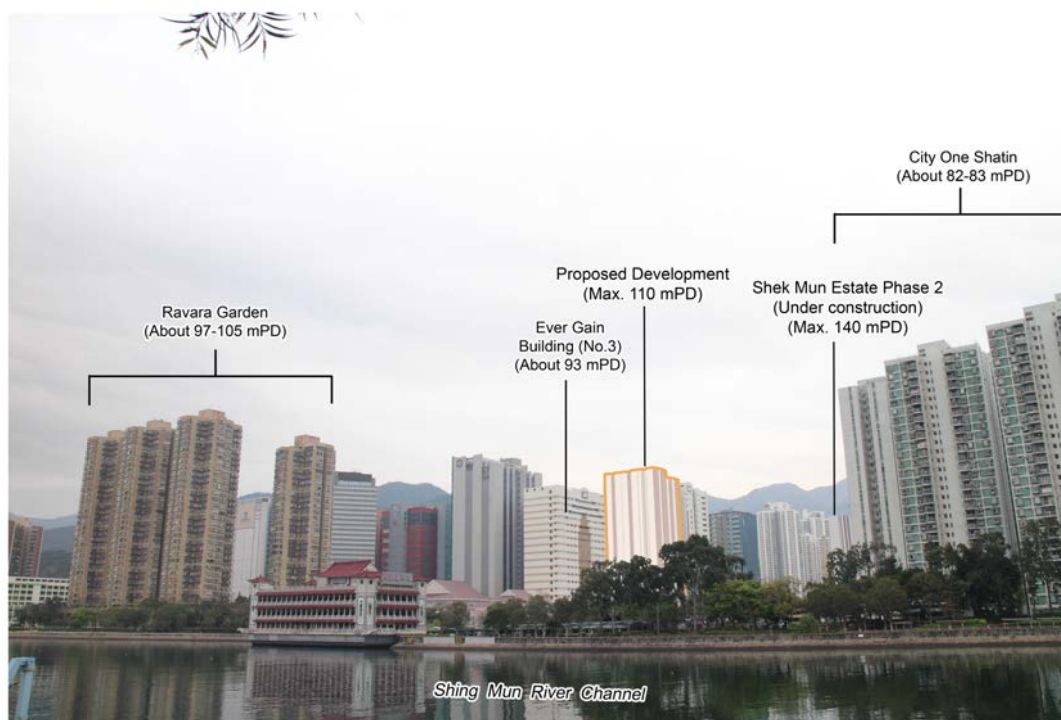


Figure 6: Viewpoint 5 – Photomontage viewing from the intersection of Siu Lek Yuen Road and Ngan Shing Street, near City One Shatin

Existing Condition without Proposed Development



Photomontage with Proposed Development





圖例
NOTATION

COMMERCIAL

綜合發展區

COMMERCIAL / RESIDENTIAL

住宅 (甲類)

住宅 (乙類)

住宅 (丙類)

VILLAGE TYPE DEVELOPMENT

工業

GOVERNMENT, INSTITUTION OR COMMUNITY

其他指定用途

GREEN BELT

C

CDA

CR

RA(A)

RB

RC(C)

V

I

GIC

O

OU

GB

地帶

綜合發展區

商業 / 住宅

住宅 (甲類)

住宅 (乙類)

住宅 (丙類)

鄉村式發展

工業

政府、機構或社區

休憩用地

其他指定用途

綠化地帶

COMMUNICATIONS

RAILWAY AND STATION (UNDERGROUND)

RAILWAY AND STATION (ELEVATED)

MAJOR ROAD AND JUNCTION

ELEVATED ROAD

MISCELLANEOUS

BOUNDARY OF PLANNING SCHEME

PLANNING AREA NUMBER

BUILDING HEIGHT CONTROL (IN METRES ABOVE PRINCIPAL DATUM)

MAXIMUM BUILDING HEIGHT (IN METRES ABOVE PRINCIPAL DATUM)

MAXIMUM BUILDING HEIGHT (IN NUMBER OF STOREYS)

PETROL FILLING STATION

交通

鐵路及車站 (地下)

鐵路及車站 (高架)

主要道路及路口

高架道路

其他

規劃範圍界線

規劃區編號

建築物高度管制區界線

最高建築物高度 (在主水平基準上若干米)

最高建築物高度 (樓層數目)

加油站

土地用途及面積一覽表
SCHEDULE OF USES AND AREAS

USES	大約面積及百分比 APPROXIMATE AREA & % 公頃 HECTARES	百分比 %	用途
COMMERCIAL	6.60	0.24	商業
COMPREHENSIVE DEVELOPMENT AREA	17.21	0.62	綜合發展區
COMMERCIAL / RESIDENTIAL	14.55	0.52	商業 / 住宅
RESIDENTIAL (GROUP A)	250.27	9.01	住宅 (甲類)
RESIDENTIAL (GROUP B)	195.52	7.04	住宅 (乙類)
RESIDENTIAL (GROUP C)	0.95	0.03	住宅 (丙類)
VILLAGE TYPE DEVELOPMENT	190.30	6.85	鄉村式發展
INDUSTRIAL	42.89	1.54	工業
GOVERNMENT, INSTITUTION OR COMMUNITY	281.93	10.51	政府、機構或社區
OPEN SPACE	253.68	9.14	休憩用地
OTHER SPECIFIED USES	215.85	7.77	其他指定用途
GREEN BELT	979.67	35.28	綠化地帶
RIVER CHANNEL	97.57	3.51	河道
MAJOR ROAD ETC.	219.98	7.94	主要道路等
TOTAL PLANNING SCHEME AREA	2776.77	100.00	規劃範圍總面積

夾附的《註釋》屬這份圖則的一部分，
現經修訂並按照城市規劃條例第5條展示。
THE ATTACHED NOTES ALSO FORM PART OF THIS PLAN
AND HAVE BEEN AMENDED FOR EXHIBITION UNDER
SECTION 5 OF THE TOWN PLANNING ORDINANCE

核准圖編號 S / S / T / 3 2 的修訂
AMENDMENTS TO APPROVED PLAN No. S / S / T / 32

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

修訂項目 A 1 項
AMENDMENT ITEM A1

修訂項目 A 2 項
AMENDMENT ITEM A2

修訂項目 A 3 項
AMENDMENT ITEM A3

修訂項目 A 4 項
AMENDMENT ITEM A4

修訂項目 B 1 項
AMENDMENT ITEM B1

修訂項目 B 2 項
AMENDMENT ITEM B2

修訂項目 B 3 項
AMENDMENT ITEM B3

修訂項目 B 4 項
AMENDMENT ITEM B4

修訂項目 B 5 項
AMENDMENT ITEM B5

修訂項目 C 項
AMENDMENT ITEM C

修訂項目 D 項
AMENDMENT ITEM D

(參看附表)
(SEE ATTACHED SCHEDULE)

香港城市規劃委員會依據城市規劃條例擬備的沙田分區計劃大綱圖
TOWN PLANNING ORDINANCE, HONG KONG TOWN PLANNING BOARD
SHA TIN - OUTLINE ZONING PLAN

SCALE 1:10,000 比例尺

圖則編號
PLAN No. S/ST/32A

APPROVED DRAFT SHA TIN OUTLINE ZONING PLAN NO. S/ST/32A

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

NOTES

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

- (1) These Notes show the uses or developments on land falling within the boundaries of the Plan which are always permitted and which may be permitted by the Town Planning Board, with or without conditions, on application. Where permission from the Town Planning Board for a use or development is required, the application for such permission should be made in a prescribed form. The application shall be addressed to the Secretary of the Town Planning Board, from whom the prescribed application form may be obtained.
- (2) Any use or development which is always permitted or may be permitted in accordance with these Notes must also conform to any other relevant legislation, the conditions of the Government lease concerned, and any other Government requirements, as may be applicable.
- (3)
 - (a) No action is required to make the existing use of any land or building conform to this Plan until there is a material change of use or the building is redeveloped.
 - (b) Any material change of use or any other development (except minor alteration and/or modification to the development of the land or building in respect of the existing use which is always permitted) or redevelopment must be always permitted in terms of the Plan or, if permission is required, in accordance with the permission granted by the Town Planning Board.
 - (c) For the purposes of subparagraph (a) above, “existing use of any land or building” means -
 - (i) before the publication in the Gazette of the notice of the first statutory plan covering the land or building (hereafter referred as ‘the first plan’),
 - a use in existence before the publication of the first plan which has continued since it came into existence; or
 - a use or a change of use approved under the Buildings Ordinance which relates to an existing building; and
 - (ii) after the publication of the first plan,
 - a use permitted under a plan which was effected during the effective period of that plan and has continued since it was effected; or
 - a use or a change of use approved under the Buildings Ordinance which relates to an existing building and permitted under a plan prevailing at the time when the use or change of use was approved.
- (4) Except as otherwise specified by the Town Planning Board, when a use or material change of use is effected or a development or redevelopment is undertaken, as always permitted in terms of the Plan or in accordance with a permission granted by the

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

- (5) Road junctions, alignments of roads and railway tracks, and boundaries between zones may be subject to minor adjustments as detailed planning proceeds.
- (6) Temporary uses (expected to be 5 years or less) of any land or building are always permitted as long as they comply with any other relevant legislation, the conditions of the Government lease concerned, and any other Government requirements, and there is no need for these to conform to the zoned use or these Notes. For temporary uses expected to be over 5 years, the uses must conform to the zoned use or these Notes.
- (7) The following uses or developments are always permitted on land falling within the boundaries of the Plan except where the uses or developments are specified in Column 2 of the Notes of individual zones:
 - (a) provision, maintenance or repair of plant nursery, amenity planting, open space, rain shelter, refreshment kiosk, road, bus/public light bus stop or lay-by, cycle track, taxi rank, nullah, public utility pipeline, electricity mast, lamp pole, telephone booth, telecommunications radio base station, automatic teller machine and shrine;
 - (b) geotechnical works, local public works, road works, sewerage works, drainage works, environmental improvement works, marine related facilities, waterworks (excluding works on service reservoir) and such other public works co-ordinated or implemented by Government; and
 - (c) maintenance or repair of watercourse and grave.
- (8) In any area shown as 'Road', all uses or developments except those specified in paragraph (7) above and those specified below require permission from the Town Planning Board :

toll plaza, on-street vehicle park and railway track.
- (9) Unless otherwise specified, all building, engineering and other operations incidental to and all uses directly related and ancillary to the permitted uses and developments within the same zone are always permitted and no separate permission is required.
- (10) In these Notes,

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

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

Approved Draft SHA TIN OUTLINE ZONING PLAN NO. S/ST/32A

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

Planning Intention

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

COMPREHENSIVE DEVELOPMENT AREA

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

Planning Intention

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

Remarks

- (a) Pursuant to Section 4A(2) of the Town Planning Ordinance, and except as otherwise expressly provided that it is not required by the Town Planning Board, an applicant for permission for development on land designated “Comprehensive Development Area” shall prepare a Master Layout Plan for the approval of the Town Planning Board and include therein the following information:
- (i) the area of the proposed land uses, the nature, position, dimension and heights of all buildings to be erected in the area;
 - (ii) the proposed total site area and gross floor area for various uses, total number of flats and flat size, where applicable;
 - (iii) the details and extent of Government, institution or community (GIC) and recreational facilities, public transport and parking facilities, and open space to be provided within the area;
 - (iv) the alignment, widths and levels of any roads proposed to be constructed within the area;
 - (v) the landscaping and urban design proposals within the area;
 - (vi) programmes of development in detail;
 - (vii) an environmental assessment report to examine any possible environmental problems that may be caused to or by the proposed development during and after construction and the proposed mitigation measures to tackle them;

(Please see next page)

COMPREHENSIVE DEVELOPMENT AREA (Cont'd)

Remarks (Cont'd)

- (viii) a drainage and sewerage impact assessment report to examine any possible drainage and sewerage problems that may be caused by the proposed development and the proposed mitigation measures to tackle them;
 - (ix) a traffic impact assessment report to examine any possible traffic problems that may be caused by the proposed development and the proposed mitigation measures to tackle them; and
 - (x) such other information as may be required by the Town Planning Board.
-
- (b) The Master Layout Plan should be supported by an explanatory statement which contains an adequate explanation of the development proposal, including such information as land tenure, relevant lease conditions, existing conditions of the site, the character of the site in relation to the surrounding areas, principles of layout design, major development parameters, design population, types of GIC facilities, and recreational and open space facilities.
 - (c) No new development, or addition, alteration and/or modification to or redevelopment of an existing building shall result in a total development and/or redevelopment in excess of a maximum gross floor area of 52,156m².
 - (d) In determining the maximum gross floor area for the purposes of paragraph (c) above, any floor space that is constructed or intended for use solely as car park, loading/unloading bay, plant room and caretaker's office, or caretaker's quarters and recreational facilities for the use and benefit of all the owners or occupiers of the domestic building or domestic part of the building, provided such uses and facilities are ancillary and directly related to the development or redevelopment, may be disregarded.
 - (e) Based on the individual merits of a development or redevelopment proposal, minor relaxation of the gross floor area restriction stated in paragraph (c) above may be considered by the Town Planning Board on application under section 16 of the Town Planning Ordinance.

COMPREHENSIVE DEVELOPMENT AREA (1)

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

Planning Intention

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

(Please see next page)

COMPREHENSIVE DEVELOPMENT AREA (1) (Cont'd)

Remarks

- (a) Pursuant to Section 4A(2) of the Town Planning Ordinance, and except as otherwise expressly provided that it is not required by the Town Planning Board, an applicant for permission for development on land designated "Comprehensive Development Area (1)" shall prepare a Master Layout Plan for the approval of the Town Planning Board and include therein the following information:
- (i) the area of the proposed land uses, the nature, position, dimensions and heights of all buildings to be erected in the area;
 - (ii) the proposed total site area and gross floor area for various uses, total number of flats and flat size, where applicable;
 - (iii) the details and extent of Government, institution or community (GIC) and recreational facilities, public transport and parking facilities, and open space to be provided within the area;
 - (iv) the alignment, widths and levels of any roads proposed to be constructed within the area;
 - (v) the landscaping and urban design proposals within the area;
 - (vi) programmes of development in detail;
 - (vii) an environmental assessment report to examine any possible environmental problems that may be caused to or by the proposed development during and after construction and the proposed mitigation measures to tackle them;
 - (viii) a drainage and sewerage impact assessment report to examine any possible drainage and sewerage problems that may be caused by the proposed development and the proposed mitigation measures to tackle them;
 - (ix) a traffic impact assessment report to examine any possible traffic problems that may be caused by the proposed development and the proposed mitigation measures to tackle them;
 - (x) a visual impact assessment report to examine any possible visual impacts that may be caused by the proposed development and the proposed mitigation measures to tackle them; and
 - (xi) such other information as may be required by the Town Planning Board.

(Please see next page)

COMPREHENSIVE DEVELOPMENT AREA (1) (Cont'd)

Remarks (Cont'd)

- (b) The Master Layout Plan should be supported by an explanatory statement which contains an adequate explanation of the development proposal, including such information as land tenure, relevant lease conditions, existing conditions of the site, the character of the site in relation to the surrounding areas, principles of layout design, major development parameters, design population, types of GIC facilities, and recreational and open space facilities.
- (c) No new development, or addition, alteration and/or modification to or redevelopment of an existing building shall result in a total development and/or redevelopment in excess of the maximum gross floor area specified below:

<u>Site</u>	<u>Maximum Gross Floor Area (GFA)</u>
CDA(1) at East Rail Fo Tan Station and the Adjoining Area	208,600m ² (the maximum domestic GFA shall not exceed 191,100m ²)
CDA(1) at Ma On Shan Rail Tai Wai Station and the Adjoining Area	253,590m ² (the maximum domestic GFA shall not exceed 219,090 m ²)
CDA(1) at Ma On Shan Rail Che Kung Temple Station	90,655 m ²

- (d) In determining the maximum gross floor area for the purposes of paragraph (c) above, any floor space that is constructed or intended for use solely as car park, loading/unloading bay, plant room and caretaker's office, or caretaker's quarters and recreational facilities for the use and benefit of all the owners or occupiers of the domestic building or domestic part of the building, provided such uses and facilities are ancillary and directly related to the development or redevelopment, may be disregarded. Any floor space that is constructed or intended for use solely as public transport facilities, railway station, railway depot, schools or Government, institution, community or social welfare facilities, as required by the Government, may also be disregarded.
- (e) Based on the individual merits of a development or redevelopment proposal, minor relaxation of the gross floor area restriction stated in paragraph (c) above may be considered by the Town Planning Board on application under section 16 of the Town Planning Ordinance.

COMMERCIAL/RESIDENTIAL

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

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

Planning Intention

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

RESIDENTIAL (GROUP A)

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

(Please see next page)

RESIDENTIAL (GROUP A) (Cont'd)

Column 1 Uses always permitted	Column 2 Uses that may be permitted with or without conditions on application to the Town Planning Board
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In addition, the following uses are always permitted (a) on the lowest three floors of a building, taken to include basements; or (b) in the purpose-designed non-residential portion of an existing building, both excluding floors containing wholly or mainly car parking, loading/unloading bays and/or plant room:

Eating Place
Educational Institution
Institutional Use (not elsewhere specified)
Off-course Betting Centre
Office
Place of Entertainment
Private Club
Public Convenience
Recyclable Collection Centre
School
Shop and Services
Training Centre

Planning Intention

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

Remarks

- (a) On land designated “Residential (Group A)1” (“R(A)1”), no new development, or addition, alteration and/or modification to or redevelopment of an existing building shall result in a total development and/or redevelopment in excess of a maximum gross floor area (GFA) of 501,800m² and a maximum building height in terms of number of storeys or metres above Principal Datum as stipulated on the Plan, or the GFA and height of the existing building, whichever is the greater.

(Please see next page)

RESIDENTIAL (GROUP A) (Cont'd)

Remarks (Cont'd)

- (b) On land designated “Residential (Group A)2” (“R(A)2”), no new development, or addition, alteration and/or modification to or redevelopment of an existing building shall result in a total development and/or redevelopment in excess of a maximum GFA of 194,500m² and a maximum building height in terms of metres above Principal Datum as stipulated on the Plan, or the GFA and height of the existing building, whichever is the greater.
- (c) On land designated “Residential (Group A)3” (“R(A)3”), no new development, or addition, alteration and/or modification to or redevelopment of an existing building shall result in a total development and/or redevelopment in excess of a maximum GFA of 43,600m² and a maximum building height in terms of metres above Principal Datum as stipulated on the Plan, or the GFA and height of the existing building, whichever is the greater.
- (d) On land designated “Residential (Group A)4” (“R(A)4”), no new development, or addition, alteration and/or modification to or redevelopment of an existing building shall result in a total development and/or redevelopment in excess of a maximum domestic GFA of 234,000m², non-domestic GFA of 19,500m² and a maximum building height in terms of metres above Principal Datum as stipulated on the Plan, or the GFA and height of the existing building, whichever is the greater.
- (e) On land designated “Residential (Group A)5” (“R(A)5”), no new development, or addition, alteration and/or modification to or redevelopment of an existing building shall result in a total development and/or redevelopment in excess of a maximum GFA of 38,580m² and a maximum building height in terms of metres above Principal Datum as stipulated on the Plan, or the GFA and height of the existing building, whichever is the greater.
- (f) On land designated “Residential (Group A)6” (“R(A)6”), no new development, or addition, alteration and/or modification to or redevelopment of an existing building shall result in a total development and/or redevelopment in excess of a maximum GFA of 26,240m² and a maximum building height in terms of metres above Principal Datum as stipulated on the Plan, or the GFA and height of the existing building, whichever is the greater.**
- ~~(f)~~(g) In determining the maximum number of storeys for the purpose of paragraph (a) above, any basement floor(s) may be disregarded.
- ~~(g)~~(h) In determining the maximum GFA for the purposes of paragraphs (a) to ~~(e)~~(f) above, any floor space that is constructed or intended for use solely as car park, loading/unloading bay, plant room and caretaker’s office, or caretaker’s quarters and recreational facilities for the use and benefit of all the owners or occupiers of the domestic building or domestic part of the building, provided such uses and facilities are ancillary and directly related to the development or redevelopment, may be disregarded.

RESIDENTIAL (GROUP A) (Cont'd)

Remarks (Cont'd)

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

RESIDENTIAL (GROUP B)

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

Planning Intention

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

Remarks

- (a) On land designated “Residential (Group B)1”, no new development, or addition, alteration and/or modification to or redevelopment of an existing building shall result in a total development and/or redevelopment in excess of a maximum plot ratio of 3.
- (b) On land designated “Residential (Group B)2”, no new development, or addition, alteration and/or modification to or redevelopment of an existing building shall result in a total development and/or redevelopment in excess of a maximum plot ratio of 3.6 and a maximum building height in terms of metres above Principal Datum as stipulated on the Plan.
- (c) On land designated “Residential (Group B)3”, no new development, or addition, alteration and/or modification to or redevelopment of an existing building shall result in a total development and/or redevelopment in excess of a maximum plot ratio of 2.5 and a maximum building height in terms of metres above Principal Datum as stipulated on the Plan.

(Please see next page)

- (d) In determining the maximum plot ratio for the purposes of paragraphs (a) to (c) above, any floor space that is constructed or intended for use solely as car park, loading/unloading bay, plant room and caretaker's office, or caretaker's quarters and recreational facilities for the use and benefit of all the owners and occupiers of the domestic building or domestic part of the building, provided such uses and facilities are ancillary and directly related to the development or redevelopment, may be disregarded.
- (e) Based on the individual merits of a development or redevelopment proposal, minor relaxation of the building height and/or plot ratio restrictions stated in paragraphs (a) to (c) above may be considered by the Town Planning Board on application under section 16 of the Town Planning Ordinance.

RESIDENTIAL (GROUP C)

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

Planning Intention

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

Remarks

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

(Please see next page)

RESIDENTIAL (GROUP C) (Cont'd)

Remarks (Cont'd)

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

- (b) In determining the maximum plot ratio for the purposes of paragraph (a) above, any floor space that is constructed or intended for use solely as car park, loading/unloading bay, plant room and caretaker's office, or caretaker's quarters and recreational facilities for the use and benefit of all the owners or occupiers of the domestic building or domestic part of the building, provided such uses and facilities are ancillary and directly related to the development or redevelopment, may be disregarded.
- (c) Based on the individual merits of a development or redevelopment proposal, minor relaxation of the plot ratio/site coverage/building height restrictions stated in paragraph (a) above may be considered by the Town Planning Board on application under section 16 of the Town Planning Ordinance.

VILLAGE TYPE DEVELOPMENT

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

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

Eating Place
Library
School
Shop and Services

Planning Intention

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

(Please see next page)

VILLAGE TYPE DEVELOPMENT (Cont'd)

Remarks

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

INDUSTRIAL

Column 1 Uses always permitted	Column 2 Uses that may be permitted with or without conditions on application to the Town Planning Board
Ambulance Depot	Broadcasting, Television and/or Film Studio
Art Studio (excluding those involving direct provision of services or goods)	Cargo Handling and Forwarding Facility (Container Freight Station, free-standing purpose-designed Logistics Centre only)
Bus Depot	Concrete Batching Plant
Cargo Handling and Forwarding Facility (not elsewhere specified)	Dangerous Goods Godown
Eating Place (Canteen, Cooked Food Centre only)	Eating Place (not elsewhere specified) (in wholesale conversion of an existing building only)
Government Refuse Collection Point	Educational Institution (in wholesale conversion of an existing building only)
Government Use (not elsewhere specified)	Exhibition or Convention Hall
Industrial Use (not elsewhere specified)	Hotel (on land designated "Industrial (1)" only)
Information Technology and Telecommunications Industries	Industrial Use (Bleaching and Dyeing Factory, Electroplating/Printed Circuit Board Manufacture Factory, Metal Casting and Treatment Factory/Workshop only)
Office (Audio-visual Recording Studio, Design and Media Production, Office Related to Industrial Use only)	Institutional Use (not elsewhere specified) (in wholesale conversion of an existing building only)
Public Convenience	Off-course Betting Centre
Public Transport Terminus or Station	Offensive Trades
Public Utility Installation	Office (not elsewhere specified)
Public Vehicle Park (excluding container vehicle)	Petrol Filling Station
Radar, Telecommunications Electronic Microwave Repeater, Television and/or Radio Transmitter Installation	Pier
Recyclable Collection Centre	Place of Entertainment (in wholesale conversion of an existing building only)
Research, Design and Development Centre	Place of Recreation, Sports or Culture (not elsewhere specified)
Shop and Services (Motor-vehicle Showroom on ground floor, Service Trades only)	Private Club
Utility Installation for Private Project	Public Clinic (in wholesale conversion of an existing building only)
Vehicle Repair Workshop	Religious Institution (in wholesale conversion of an existing building only)
Warehouse (excluding Dangerous Goods Godown)	Shop and Services (not elsewhere specified) (ground floor only, except in wholesale conversion of an existing building and Ancillary Showroom [#] which may be permitted on any floor)
	Training Centre (in wholesale conversion of an existing building only)
	Wholesale Trade

(Please see next page)

INDUSTRIAL (Cont'd)

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

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

Planning Intention

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

GOVERNMENT, INSTITUTION OR COMMUNITY

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

Planning Intention

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

(Please see next page)

GOVERNMENT, INSTITUTION OR COMMUNITY (Cont'd)

Remarks

- (a) No new development, or addition, alteration and/or modification to or redevelopment of an existing building shall result in a total development and/or redevelopment in excess of the maximum building height in terms of number of storeys as stipulated on the Plan, or the height of the existing building, whichever is the greater.
- (b) In determining the maximum number of storeys for the purposes of paragraph (a) above, any basement floor(s) may be disregarded.
- (c) Based on the individual merits of a development or redevelopment proposal, minor relaxation of the building height restriction stated in paragraph (a) above may be considered by the Town Planning Board on application under section 16 of the Town Planning Ordinance.

OPEN SPACE

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

Planning Intention

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

OTHER SPECIFIED USES

Column 1 Uses always permitted	Column 2 Uses that may be permitted with or without conditions on application to the Town Planning Board
<u>For “Railway Station Development” Only</u>	
Ambulance Depot	Broadcasting, Television and/or Film Studio
Commercial Bathhouse/Massage Establishment	Flat
Eating Place	Government Refuse Collection Point
Exhibition or Convention Hall	Petrol Filling Station
Government Use (not elsewhere specified)	Place of Recreation, Sports or Culture
Hotel	Religious Institution
Library	Shop and Services (Motor-vehicle
Off-course Betting Centre	Showroom only)
Office	
Place of Entertainment	
Private Club	
Public Clinic	
Public Convenience	
Public Transport Terminus or Station	
Public Utility Installation	
Public Vehicle Park (excluding container vehicle)	
Railway Station	
Recyclable Collection Centre	
School	
Shop and Services (not elsewhere specified)	
Utility Installation for Private Project	

Planning Intention

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

(Please see next page)

OTHER SPECIFIED USES (Cont'd)

Column 1 Uses always permitted	Column 2 Uses that may be permitted with or without conditions on application to the Town Planning Board
<u>For "Railway Depot Comprehensive Development Area" Only</u>	
Ambulance Depot	Broadcasting, Television and/or Film Studio
Commercial Bathhouse/Massage Establishment	Eating Place (Cooked Food Centre only)
Eating Place (not elsewhere specified)	Educational Institution
Exhibition or Convention Hall	Government Refuse Collection Point
Flat	Industrial Use (Printing, Publishing and Allied Industries only)
Government Use (not elsewhere specified)	Market (Hawker Centre only)
Library	Petrol Filling Station
Market (not elsewhere specified)	Recyclable Collection Centre
Off-course Betting Centre	Shop and Services (Motor-vehicle Showroom only)
Office	
Place of Entertainment	
Place of Recreation, Sports or Culture	
Private Club	
Public Clinic	
Public Convenience	
Public Transport Terminus or Station	
Public Utility Installation	
Public Vehicle Park (excluding container vehicle)	
Railway Depot	
Religious Institution	
Residential Institution	
School	
Shop and Services (not elsewhere specified)	
Social Welfare Facility	
Utility Installation for Private Project	

Planning Intention

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

(Please see next page)

OTHER SPECIFIED USES (Cont'd)

Column 1 Uses always permitted	Column 2 Uses that may be permitted with or without conditions on application to the Town Planning Board
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For “Refuse Transfer Station” Only

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

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

For “Kowloon-Canton Railway” Only

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

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

(Please see next page)

OTHER SPECIFIED USES (Cont'd)

Column 1 Uses always permitted	Column 2 Uses that may be permitted with or without conditions on application to the Town Planning Board
<u>For "Business" Only</u>	
Schedule I: for open-air development or for building other than industrial or industrial-office building [@]	
Ambulance Depot	Broadcasting, Television and/or
Commercial Bathhouse/Massage Establishment	Film Studio
Eating Place	Cargo Handling and Forwarding Facility
Educational Institution	Government Refuse Collection Point
Exhibition or Convention Hall	Government Use (not elsewhere specified)
Government Use (Police Reporting Centre, Post Office only)	Hotel
Information Technology and Telecommunications Industries	Non-polluting Industrial Use (not elsewhere specified)
Institutional Use (not elsewhere specified)	Petrol Filling Station
Library	School (not elsewhere specified)
Non-polluting Industrial Use (excluding industrial undertakings involving the use/storage of Dangerous Goods ^Δ)	Social Welfare Facility (excluding those involving residential care)
Off-course Betting Centre	Warehouse (excluding Dangerous Goods Godown)
Office	Wholesale Trade
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	

(Please see next page)

OTHER SPECIFIED USES (Cont'd)

Column 1 Uses always permitted	Column 2 Uses that may be permitted with or without conditions on application to the Town Planning Board
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For "Business" Only (Cont'd)

Schedule II: for industrial or industrial-office building @

Ambulance Depot	Broadcasting, Television and/or Film Studio
Art Studio (excluding those involving direct provision of services or goods)	Cargo Handling and Forwarding Facility (Container Freight Station, free-standing purpose-designed Logistics Centre only)
Cargo Handling and Forwarding Facility (not elsewhere specified)	Industrial Use (not elsewhere specified)
Eating Place (Canteen only)	Off-course Betting Centre
Government Refuse Collection Point	Office (not elsewhere specified)
Government Use (not elsewhere specified)	Petrol Filling Station
Information Technology and Telecommunications Industries	Place of Recreation, Sports or Culture (not elsewhere specified)
Non-polluting Industrial Use (excluding industrial undertakings involving the use/storage of Dangerous Goods ^Δ)	Private Club
Office (excluding those involving direct provision of customer services or goods)	Shop and Services (not elsewhere specified) (ground floor only except Ancillary Showroom [#] which may be permitted on any floor)
Public Convenience	Vehicle Repair Workshop
Public Transport Terminus or Station	Wholesale Trade
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^Δ, the following use is always permitted :

Office

(Please see next page)

OTHER SPECIFIED USES (Cont'd)

Column 1 Uses always permitted	Column 2 Uses that may be permitted with or without conditions on application to the Town Planning Board
<u>For "Business" Only (Cont'd)</u>	
In addition, the following uses are always permitted in the purpose-designed non-industrial portion on the lower floors (except basements and floors containing wholly or mainly car parking, loading/unloading bays and/or plant room) of an existing building, provided that the uses are separated from the industrial uses located above by a buffer floor or floors and no industrial uses are located within the non-industrial portion:	In addition, the following use may be permitted with or without conditions on application to the Town Planning Board in the purpose-designed non-industrial portion on the lower floors (except basements and floors containing wholly or mainly car parking, loading/unloading bays and/or plant room) of an existing building, provided that the use is separated from the industrial uses located above by a buffer floor or floors and no industrial uses are located within the non-industrial portion:

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

Social Welfare Facility (excluding those involving residential care)

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

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

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

Planning Intention

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

(Please see next page)

OTHER SPECIFIED USES (Cont'd)

Column 1 Uses always permitted	Column 2 Uses that may be permitted with or without conditions on application to the Town Planning Board
<u>For “Business (1)” Only</u>	
Schedule I: for open-air development or for building other than industrial or industrial-office building [@]	
Ambulance Depot	Broadcasting, Television and/or
Commercial Bathhouse/Massage Establishment	Film Studio
Eating Place	Cargo Handling and Forwarding Facility
Government Use (Police Reporting Centre, Post Office only)	Educational Institution
Information Technology and Telecommunications Industries	Exhibition or Convention Hall
Institutional Use (not elsewhere specified)	Government Refuse Collection Point
Library	Government Use (not elsewhere specified)
Non-polluting Industrial Use (excluding industrial undertakings involving the use/storage of Dangerous Goods ^Δ)	Hotel
Off-course Betting Centre	Non-polluting Industrial Use (not elsewhere specified)
Office	Petrol Filling Station
Place of Entertainment	School
Place of Recreation, Sports or Culture	Shop and Services (Retail Shop only)
Private Club	Social Welfare Facility (excluding those involving residential care)
Public Clinic	Warehouse (excluding Dangerous Goods Godown)
Public Convenience	Wholesale Trade
Public Transport Terminus or Station	
Public Utility Installation	
Public Vehicle Park (excluding container vehicle)	
Radar, Telecommunications Electronic Microwave Repeater, Television and/or Radio Transmitter Installation	
Recyclable Collection Centre	
Religious Institution	
Research, Design and Development Centre	
Shop and Services (not elsewhere specified)	
Training Centre	
Utility Installation for Private Project	

(Please see next page)

OTHER SPECIFIED USES (Cont'd)

Column 1 Uses always permitted	Column 2 Uses that may be permitted with or without conditions on application to the Town Planning Board
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For "Business (1)" Only (Cont'd)

Schedule II: for industrial or industrial-office building @

Ambulance Depot	Broadcasting, Television and/or Film Studio
Art Studio (excluding those involving direct provision of services or goods)	Cargo Handling and Forwarding Facility (Container Freight Station, free-standing purpose-designed Logistics Centre only)
Cargo Handling and Forwarding Facility (not elsewhere specified)	Industrial Use (not elsewhere specified)
Eating Place (Canteen only)	Off-course Betting Centre
Government Refuse Collection Point	Office (not elsewhere specified)
Government Use (not elsewhere specified)	Petrol Filling Station
Information Technology and Telecommunications Industries	Place of Recreation, Sports or Culture (not elsewhere specified)
Non-polluting Industrial Use (excluding industrial undertakings involving the use/storage of Dangerous Goods ^Δ)	Private Club
Office (excluding those involving direct provision of customer services or goods)	Shop and Services (not elsewhere specified) (ground floor only except Ancillary Showroom [#] which may be permitted on any floor)
Public Convenience	Vehicle Repair Workshop
Public Transport Terminus or Station	Wholesale Trade
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^Δ, the following use is always permitted :

Office

(Please see next page)

OTHER SPECIFIED USES (Cont'd)

Column 1 Uses always permitted	Column 2 Uses that may be permitted with or without conditions on application to the Town Planning Board
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For “Business (1)” Only (Cont'd)

In addition, the following uses are always permitted in the purpose-designed non-industrial portion on the lower floors (except basements and floors containing wholly or mainly car parking, loading/unloading bays and/or plant room) of an existing building, provided that the uses are separated from the industrial uses located above by a buffer floor or floors and no industrial uses are located within the non-industrial portion:	In addition, the following uses may be permitted with or without conditions on application to the Town Planning Board in the purpose-designed non-industrial portion on the lower floors (except basements and floors containing wholly or mainly car parking, loading/unloading bays and/or plant room) of an existing building, provided that the uses are separated from the industrial uses located above by a buffer floor or floors and no industrial uses are located within the non-industrial portion:
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Commercial Bathhouse/Massage Establishment Eating Place Institutional Use (not elsewhere specified) Library Off-course Betting Centre Office Place of Entertainment Private Club Public Clinic Religious Institution Shop and Services (not elsewhere specified) Training Centre	Educational Institution Exhibition or Convention Hall School (excluding kindergarten) Shop and Services (Retail Shop only) Social Welfare Facility (excluding those involving residential care)
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@ *An industrial or industrial-office building means a building which is constructed for or intended to be used by industrial or industrial-office purpose as approved by the Building Authority.*

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

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

Planning Intention

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

(Please see next page)

OTHER SPECIFIED USES (Cont'd)

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

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

Planning Intention

This zone is primarily for land intended for cemetery use.

For "Amenity Area" Only

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

Planning Intention

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

For "Waterfront Amenity Area" Only

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

Planning Intention

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

(Please see next page)

OTHER SPECIFIED USES (Cont'd)

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

For "Columbarium" Only

Columbarium

Public Utility Installation
Utility Installation for Private Project

Planning Intention

This zone is primarily for land intended for columbarium use.

Remarks

- (a) On land designated "Other Specified Uses" annotated "Columbarium",
- (i) no new development or addition, alteration and/or modification to or redevelopment of an existing building shall result in a total development and/or redevelopment in excess of a maximum gross floor area of 4,149m² and a maximum site coverage of 37.5%; and
 - (ii) no new development or addition, alteration and/or modification to an existing building, other than redevelopment of an existing building, shall exceed a maximum building height of 14.5m. An existing building is allowed to be redeveloped to the same height of the building provided the existing gross floor area of the building is not exceeded.
- (b) Based on the individual merits of a development or redevelopment proposal, minor relaxation of the gross floor area/site coverage/building height restrictions stated in paragraphs (a) above may be considered by the Town Planning Board on application under section 16 of the Town Planning Ordinance.

(Please see next page)

OTHER SPECIFIED USES (Cont'd)

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

Private Club
Race Course

Government Use
Place of Recreation, Sports or Culture
Public Utility Installation
Utility Installation for Private Project

Planning Intention

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

For All Other Sites (Not Listed Above)

As Specified on the Plan

Government Use (not elsewhere specified)
Public Utility Installation
Utility Installation for Private Project

Planning Intention

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

GREEN BELT

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

Planning Intention

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

~~APPROVED~~ DRAFT SHA TIN OUTLINE ZONING PLAN NO. S/ST/32A

EXPLANATORY STATEMENT

APPROVED DRAFT SHA TIN OUTLINE ZONING PLAN NO. S/ST/32A

EXPLANATORY STATEMENT

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APPROVED DRAFT SHA TIN OUTLINE ZONING PLAN NO. S/ST/32A

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

EXPLANATORY STATEMENT

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

1. INTRODUCTION

This Explanatory Statement is intended to assist an understanding of the ***approved draft*** Sha Tin Outline Zoning Plan (OZP) No. S/ST/32A. It reflects the planning intention and objectives of the Town Planning Board (the Board) for various land-use zonings of the Plan.

2. AUTHORITY FOR THE PLAN AND PROCEDURE

- 2.1 On 15 April 1966, the draft Sha Tin OZP No. LST/47 was exhibited for public inspection under section 5 of the Town Planning Ordinance (the Ordinance). On 13 June 1967, the then Governor-in-Council (G in C), under section 8(1) of the Ordinance, approved the draft Sha Tin OZP No. LST/47. On 10 July 1973, the then G in C referred the approved OZP No. LST/47 to the Board for replacement under section 12 of the Ordinance. The OZP was subsequently amended seven times and exhibited for public inspection under section 5 or 7 of the Ordinance.
- 2.2 On 5 July 1988, the then G in C, under section 9(1)(a) of the Ordinance, approved the draft Sha Tin OZP, which was subsequently renumbered as S/ST/4. On 25 June 1991, the then G in C referred the approved OZP No. S/ST/4 to the Board for amendment under section 12(1)(b)(ii) of the Ordinance. It was then amended five times and exhibited for public inspection under section 5 or 7 of the Ordinance to reflect the changing circumstances.
- 2.3 On 9 December 1997, the Chief Executive in Council (CE in C), under section 9(1)(a) of the Ordinance, approved the draft Sha Tin OZP, which was subsequently renumbered as S/ST/10. On 21 July 1998, the CE in C referred the approved Sha Tin OZP No. S/ST/10 to the Board for amendment under section 12(1)(b)(ii) of the Ordinance. The OZP was subsequently amended and exhibited for public inspection under section 5 of the Ordinance.
- 2.4 On 11 May 1999, the CE in C, under section 9(1)(a) of the Ordinance, approved the draft Sha Tin OZP, which was subsequently renumbered as S/ST/12. On 20 July 1999, the CE in C referred the approved OZP No. S/ST/12 to the Board for amendment under section 12(1)(b)(ii) of the Ordinance. It was amended twice and exhibited for public inspection under section 5 or 7 of the Ordinance to incorporate the adjustment of planning scheme boundary and to reflect the changing circumstances.

- 2.5 On 25 September 2001, the CE in C, under section 9(1)(a) of the Ordinance, approved the draft Sha Tin OZP, which was subsequently renumbered as S/ST/15. On 27 November 2001, the CE in C referred the approved Sha Tin OZP No. S/ST/15 to the Board for amendment under section 12(1)(b)(ii) of the Ordinance. It was then amended four times, including the extension of planning scheme boundary to include an area to be reclaimed on the western side of Sha Tin Hoi (Tide Cove), and was exhibited under section 5 or 7 of the Ordinance.
- 2.6 On 8 June 2004, the CE in C, under section 9(1)(a) of the Ordinance, approved the draft Sha Tin OZP, which was subsequently renumbered as S/ST/20. On 13 September 2005, the CE in C referred the approved Sha Tin OZP No. S/ST/20 to the Board for amendment under section 12(1)(b)(ii) of the Ordinance. It was then amended twice and exhibited for public inspection under section 5 or 7 of the Ordinance to reflect the changing circumstances.
- 2.7 On 5 June 2007, the CE in C, under section 9(1)(a) of the Ordinance, approved the draft Sha Tin OZP, which was subsequently renumbered as S/ST/23. On 6 July 2010, the CE in C referred the approved Sha Tin OZP No. S/ST/23 to the Board for amendment under section 12(1)(b)(ii) of the Ordinance. It was then amended twice and exhibited for public inspection under section 5 or 7 of the Ordinance to reflect the changing circumstances.
- 2.8 On 13 March 2012, the CE in C under section 9(1)(a) of the Ordinance, approved the draft Sha Tin OZP, which was subsequently re-numbered as S/ST/26. On 5 June 2012, the CE in C referred the approved Sha Tin OZP No. S/ST/26 to the Board for amendment under section 12(1)(b)(ii) of the Ordinance. It was subsequently amended and exhibited for public inspection under section 5 of the Ordinance.
- 2.9 On 2 July 2013, the CE in C, under section 9 (1)(a) of the Ordinance, approved the draft Sha Tin OZP, which was subsequently renumbered as S/ST/28. On 3 September 2013, the CE in C referred the approved Sha Tin OZP No. S/ST/28 to the Board for amendment under section 12(1)(b)(ii) of the Ordinance. It was subsequently amended and exhibited for public inspection under section 5 of the Ordinance.
- 2.10 On 2 September 2014, the CE in C, under section 9(1)(a) of the Ordinance, approved the draft Sha Tin OZP, which was subsequently renumbered as S/ST/30. On 6 January 2015, the CE in C referred the approved Sha Tin OZP No. S/ST/30 to the Board for amendment under section 12(1)(b)(ii) of the Ordinance. The reference back of the OZP was notified in the Gazette on 16 January 2015 under section 12(2) of the Ordinance.
- 2.11 On 17 April 2015, the draft Sha Tin OZP No. S/ST/31, incorporating amendments including (i) the rezoning of a site at Au Pui Wan Street from “Industrial”(“I”) to “Residential (Group A)5”; (ii) the rezoning of a site at Shan Mei Street from “I” to “Other Specified Uses” annotated “Petrol Filling Station”; (iii) the rezoning of three sites, including a site at Lai Ping Road from “Green Belt” (“GB”) to “Residential (Group B)2” (“R(B)2”), a site north of To Shek Reservoir from “GB” to “R(B)2” and a site near Tai Po Road – Sha Tin

Heights section from “GB” to “R(B)3”; (iv) inclusion of ‘Art Studio (excluding those involving direct provision of services or goods)’ as a Column 1 use under the “I” zone and under Schedule II of the “Other Specified Uses” annotated “Business” (“OU(B)”) and “Other Specified Uses” annotated “Business (1)” (“OU(B)1”) zones, and corresponding amendment to the ‘Place of Recreation, Sports or Culture’ use of the zones; and (v) inclusion of ‘People Mover (Escalators/Lifts)’ under Column 1 of the “Other Specified Uses” annotated “Amenity Area” (“OU(A)”) zone, was exhibited for public inspection under section 5 of the Ordinance. During the two-month exhibition period, one representation was received. On 3 July 2015, the representation was published for three weeks for public comments. Three comments on the representation were received. After giving consideration to the representation and comments under section 6B(1) of the Ordinance on 11 September 2015, the Board decided not to propose any amendment to the draft OZP to meet the representation.

- 2.12 On 1 December 2015, the CE in C, under section 9 (1)(a) of the Ordinance, approved the draft Sha Tin OZP, which was subsequently renumbered as S/ST/32. On 11 December 2015, the approved Sha Tin OZP No. S/ST/32 ~~(the Plan)~~ was exhibited for public inspection under section 9(5) of the Ordinance. ***On 18.10.2016, the CE in C referred the approved Sha Tin OZP No. S/ST/32 to the Board for amendment under section 12(1)(b)(ii) of the Ordinance. The reference back of the OZP was notified in the Gazette on 28.10.2016 under section 12(2) of the Ordinance.***
- 2.13 ***On XX XXXX 2017, the draft Sha Tin OZP No. S/ST/33 (the Plan), incorporating amendments including (i) the rezoning of four sites at A Kung Kok to facilitate the development of the Sha Tin Cavern Sewage Treatment Works; (ii) the rezoning of five sites at On Hing Lane to facilitate the columbarium development with garden of remembrance; (iii) the rezoning of the Olympic Stables from “Government, Institution or Community” (“G/IC”) to “Other Specified Uses” annotated “Race Course” (“OU(Race Course)”); (iv) the rezoning of a site at On Muk Street from “Open Space” (“O”) to “Residential (Group A) 6” (“R(A)6”) to facilitate a public housing development; and (v) the addition of the Notes for “OU(Race Course)” zone, 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 zones and major road networks for Sha Tin so that development and redevelopment within Sha Tin can be put under statutory planning control. It also provides the planning framework for preparing more detailed non-statutory plans which form the basis for public works planning and site reservation for various uses.
- 3.2 The Plan is to illustrate the broad principles of development and planning control only. It is a small-scale plan and the road alignments and boundaries between the land-use zones may be subject to minor alterations as detailed planning proceeds.
- 3.3 Since the Plan is to show broad land use zonings, there would be situations in which small strips of land not intended for building development purposes and carry no development right under the lease, such as the areas restricted as non-building area or for garden, slope maintenance and access road purposes, are included in the residential zones. The general principle is that such areas should not be taken into account in plot ratio and site coverage calculation. Development within residential zones should be restricted to building lots carrying development right in order to maintain the character and amenity of the Sha Tin area and not to overload the road network in this area.
- 3.4 Also, there would be cases that areas occupied by free-standing purpose-designed buildings that are solely accommodating schools or other Government, institution or community facilities, including those located on ground and on podium level, are included in the residential zones. Such areas should not be included into the plot ratio and site coverage calculations.

4. NOTES OF THE PLAN

- 4.1 Attached to the Plan is a set of Notes which shows the types of uses or developments which are always permitted within the Area and in particular zones and which may be permitted by the Board, with or without conditions, on application. The provision for application for planning permission under section 16 of the Ordinance allows greater flexibility in land-use planning and control of development to meet changing needs.
- 4.2 For the guidance of the general public, a set of definitions that explains some of the terms used in the Notes may be obtained from the Technical Services Division of the Planning Department and can be downloaded from the Board's website at <http://www.info.gov.hk/tpb>.

5. THE PLANNING SCHEME AREA

- 5.1 The Planning Scheme Area (the Area) covered by the Plan is about 2,777 hectares. Its inner core lies at the bottom of the Sha Tin Valley which is separated from Kowloon by a range of hills, dominated by Lion Rock (495m above sea level) and Sugar Loaf Peak (372m above sea level). These hills form

a natural barrier to the expansion of the Sha Tin New Town towards the south and south-east. Ma On Shan, the extension to Sha Tin New Town, lies to the north-east of the Area.

- 5.2 Sha Tin Hoi (Tide Cove) used to be a wide and relatively shallow estuary. It has been extensively reclaimed and the reclamation has formed the southern extremity of Tolo Harbour. Lek Yuen and Wo Che Estates and the race course are situated on reclaimed land. Large pieces of land near Siu Lek Yuen, Ngau Pei Sha and Ma Liu Shui have also been reclaimed from the Tide Cove.
- 5.3 The boundary of the Area is shown by a heavy broken line on the Plan. For planning and reference purpose, the Area is sub-divided into a number of smaller planning areas as shown on the Plan.

6. POPULATION

~~According to~~ **Based on** the 2011 Census, the population of the Area was **estimated to be** about 433,150 persons, comprising 236,650 in public housing (including Home Ownership Schemes (HOS) and Private Sector Participation Schemes (PSPS)) and 196,500 in private housing including village type developments. It is estimated that the total planned population would be about ~~522,250~~ **518,750** persons.

7. LAND-USE ZONINGS

7.1 Commercial ("C") : Total Area 6.60 ha

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

7.2 Comprehensive Development Area (“CDA”) : Total Area 17.21 ha

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

7.2.2 This zoning comprises the following four sites :

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

Development within this “CDA” site is restricted to a maximum gross floor area (GFA) of 52,156m². Residential development with landscape areas is restricted to the southern part of the site. The northern part of the site, which is covered by rich vegetation, should be preserved. Upon completion, about 820 flats will be provided.

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

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

(iii) “CDA(1)” site at the Ma On Shan Line Tai Wai Station and its Adjoining Area : Total Area 5.48 ha

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

(iv) “CDA(1)” site at the Ma On Shan Line Che Kung Temple Station : Total Area 2.05 ha

Development within this “CDA(1)” site is restricted to a maximum GFA of 90,655m². The residential development, namely The Riverpark, at the site has been completed providing about 981 flats.

- 7.2.3 Pursuant to section 4A(2) of the Ordinance, and except as otherwise expressly provided that it is not required by the Board, an applicant for permission for development on land designated “CDA” shall prepare a Master Layout Plan for the approval of the Board. The Master Layout Plan should be supported by an explanatory statement which contains an adequate explanation of the development proposal, including such information as land tenure, relevant lease conditions, existing conditions of the site, the character of the site in relation to the surrounding areas, principles of layout design, major development parameters, design population, types of Government, institution or community (GIC) facilities, and recreational and open space facilities.

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

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

7.4 Residential (Group A) (“R(A)”) : Total Area ~~249.98~~ 250.55 ha

- 7.4.1 This zone is intended primarily for high-density residential developments. Commercial uses are always permitted on the lowest three floors of a building or in the purpose-designed non-residential portion of an existing building.
- 7.4.2 There are fourteen existing public rental housing estates, ~~eleven~~ **twelve** HOS, three PSPS and one Sandwich Class Housing in the Area. There are also ~~five~~ **six** planned public housing developments ~~in the Area including a planned public housing development at Planning Area 52 (Shui Chuen O) and another four planned public housing developments at Planning Areas 11, 16 and 58D. in Planning Areas 11, 16, 52 and 58D.~~ Within public housing estates, there are a wide range of low-rise free-standing GIC facilities including schools, community halls, children and youth centres, elderly centres, social and welfare centres as well as ancillary facility buildings such as car parks, shopping centres and markets serving the residents of the concerned estates. Such low-rise free-standing GIC and ancillary facility buildings should be kept as breathing spaces and visual relief for the building mass. No new addition, alteration and/or modification to or redevelopment of these existing individual free-standing GIC and ancillary facility buildings shall result in a height exceeding that of the

existing building. All public housing estates are governed by planning brief. Upon the future redevelopment of the estates, the layout and design of these GIC and ancillary facility buildings should be comprehensively reviewed with the support of relevant impact assessments on air ventilation and visual aspects. In addition, planning briefs setting out the development parameters, design requirements and the relevant technical assessments to be conducted for the planned public housing developments will be provided to guide the future development of the sites.

- 7.4.3 This zoning includes **five six** sub-areas which are subject to the following development restrictions:

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

- (a) The planned public housing development at Planning Area 52 (Shui Chuen O) is under this zoning. Development/redevelopment within this zoning is subject to restrictions on the maximum total gross floor area of 501,800m² and building height restriction as shown on the Plan, or the GFA and height of existing building, whichever is the greater. The building height restrictions stipulated on the Plan are the maximum permitted height. Staggered building heights with a maximum of 30 domestic storeys and general building heights ranging from 25 to 28 domestic storeys should be adopted to create a stepped height profile against the hilly terrain. Maximum building heights of 2 to 4 storeys are stipulated along two view corridors where only low-rise structures are permitted.
- (b) The building height restrictions in terms of number of storeys are applicable to buildings above the ground level. Any basement floors may be disregarded.

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

- (c) The planned public housing development at Planning Areas 16 and 58D is under this zoning. Development/redevelopment within this zoning is subject to restrictions on the maximum total gross floor area of 194,500m² and building height restriction as shown on the Plan, or the GFA and height of existing building, whichever is the greater. The building height restriction stipulated on the Plan is the maximum permitted height. Building heights ranging from 26 to 36 domestic storeys should be adopted to create a height profile stepping up from both ends to the centre with reference to the hilly terrain to the north.

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

- (d) The planned HOS development at Planning Area 16 is under this zoning. Development/redevelopment within this zoning is subject to restrictions on the maximum total gross floor area of 43,600m² and building height restriction as shown on the Plan, or the GFA and height

of existing building, whichever is the greater.

“Residential (Group A)4” (“R(A)4”): Total Area 4.394.25 ha

- (e) The planned public housing estate at Planning Area 11 is under this zoning. Development/redevelopment within this zoning is subject to restrictions on the maximum total domestic gross floor area of 234,000m², non-domestic gross floor area of 19,500m² and building height restriction as shown on the Plan, or the GFA and height of existing building, whichever is the greater. Building heights ranging from about 110 to 140mPD should be adopted to create a height profile stepping up from the northwest near On Ming Street to the southeast.

“Residential (Group A)5” (“R(A)5”): Total Area 0.7 ha

- (f) The planned public housing development at Au Pui Wan Street in Planning Area 16 is under this zoning. Development/redevelopment within this zoning is subject to restrictions on the maximum total gross floor area of 38,580m² and building height restriction as shown on the Plan, or the GFA and height of existing building, whichever is the greater.

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

- (g) ***The planned public housing development at On Muk Street in Planning Area 11 is under this zoning. Development/redevelopment within this zoning is subject to restrictions on the maximum total gross floor area of 26,240m² and building height restriction as shown on the Plan, or the GFA and height of existing building, whichever is the greater.***

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

7.4.5 Minor relaxation of the GFA and building height restrictions for the “R(A)1”, “R(A)2”, “R(A)3”, “R(A)4”, ***and*** “R(A)5” ***and*** “R(A)6” zones may be considered by the Board on application under section 16 of the Town Planning Ordinance. Each application for minor relaxation of GFA/building height restrictions will be considered on its own merits.

7.5 Residential (Group B) (“R(B)”): 195.52 ha

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

7.5.2 Four sites at Fu Kin Street, Lai Ping Road, north of To Shek Reservoir

and Tai Po Road-Sha Tin Heights are zoned “R(B)1”, “R(B)2” or “R(B)”3 which are subject to plot ratio restrictions and/or building height restrictions as shown on the Plan. The restrictions are necessary for the purposes of preserving the general amenity of the area as well as to ensure that the scale of the developments will be compatible with the adjacent developments and will not overtax the infrastructural provision in the area.

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

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

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

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

7.7 Village Type Development (“V”) : Total Area 190.30 ha

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

- 7.7.2 In order to ensure that any future development or redevelopment within this zone would retain the village character, a maximum building height of 3 storeys (8.23m) or the height of the existing building(s), whichever is the greater, is imposed under this zone.

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

7.8 Industrial (“I”) : Total Area ~~45.48~~ 42.71 ha

- 7.8.1 This zone is intended primarily for general industrial uses to ensure an adequate supply of industrial floor space to meet demand from production-oriented industries. Information technology and telecommunications industries and office related to industrial use are always permitted in this zone.
- 7.8.2 Industrial land is distributed in three locations, Planning Area 3 (Tai Wai), Planning Area 14 (Siu Lek Yuen) and Planning Area 16 (Fo Tan). They are separated as far apart as possible from the residential areas by open spaces or other physical features.
- 7.8.3 All industrial land in Planning Area 14 (Siu Lek Yuen) is zoned to “I(1)” with ‘Hotel’ use under Column 2 in the Notes to allow flexibility for hotel development through planning application.

7.9 Government, Institution or Community (“G/IC”) : Total Area ~~296.70~~ 291.94 ha

- 7.9.1 This zone is intended primarily for the provision of Government, institution or community (GIC) facilities serving the needs of the local residents and/or a wider district, region or the territory. It is also intended to provide land for uses directly related to or in support of the work of the Government, organizations providing social services to meet community needs, and other institutional establishments. Such developments, particular for those which are low-rise, serve to provide visual and spatial relief to the built-up environment of the Area.
- 7.9.2 Major GIC facilities provided in the Area include:
- (a) the Sha Tin Town Hall, the Sha Tin Public Library and the Sha Tin Magistracy in Planning Area 7;
 - (b) the Sha Tin Government Offices building in Planning Area 20;
 - (c) the Chinese University of Hong Kong in Planning Area 68;
 - (d) the Hong Kong Institute of Vocational Education (Sha Tin) in Planning Area 21;
 - (e) the Hang Seng School of Commerce in Planning Area 54;
 - (f) the Hong Kong Sports Institute in Planning Area 47;
 - (g) the Prince of Wales Hospital in Planning Area 14 and the Sha Tin Hospital in Planning Area 65;
 - (h) Yuen Wo Road Sports Centre and Sha Tin Jockey Club Swimming Pool in Planning Area 26;
 - (i) service reservoirs, including those in Planning Areas 56 and 62;
 - (j) the Hong Kong Heritage Museum in Planning Area 25;
 - (k) the Ten Thousand Buddhas Monastery in Planning Area 6; and
 - (l) Hin Tin Swimming Pool in Planning Area 17
- 7.9.3 Local GIC facilities are/will be provided in the commercial/residential, residential and industrial developments when detailed planning for the Area proceeds.

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

7.10 Open Space (“O”) : Total Area ~~253.97~~ 253.68 ha

- 7.10.1 This zone is intended primarily for the provision of outdoor open-air public space for active and/or passive recreational uses serving the needs of local residents as well as the general public.
- 7.10.2 A prominent feature is the provision of large landscaped open spaces in Planning Area 12 (the Sha Tin Park), Planning Area 28 in the vicinity of the town centre and along the river channel at Siu Lek Yuen. They form a major node of recreational activities and extend along both sides of Shing Mun River providing a spine for pedestrian and cycle movements. A major recreational ground with soccer pitches and tennis courts etc. is provided in Planning Area 26 (Yuen Wo Road). Playgrounds with different active and passive recreational facilities are also provided in Planning Areas 2 (Che Kung Miu Road Playground), 5 (Tsang Tai Uk Playground) and 17 (Hin Tin Playground).
- 7.10.3 Other major open space zones, including those in Planning Areas 2 and 33, are suitable for passive recreational purposes. In addition, open spaces in Planning Areas 13 and 24 are zoned for this purpose because of their ‘fung shui’ significance or landscape quality.
- 7.10.4 In addition to the major open spaces as indicated on the Plan, local open spaces will also be provided within the public housing estates and the large private residential developments for the enjoyment of local residents.

7.11 Other Specified Uses (“OU”) : Total Area ~~205.27~~ 215.57 ha

- 7.11.1 This zone is intended for specific development(s) and/or uses, which is/are specified in the annotation of the zone. They include the following specific uses :
- (a) the Sha Tin Race Course in Planning Area 47;
 - (b) the sewage treatment plant in Planning Area 47;
 - (c) the refuse transfer station in Planning Area 65;
 - (d) the Fu Shan Crematorium and Columbarium and its extension, a public mortuary and a funeral parlour in Planning Area 18;
 - (e) the East Rail Sha Tin Station, with commercial development and bus terminus, in Planning Area 20;
 - (f) the East Rail Ho Tung Lau Maintenance Centre, with commercial/residential developments above, in Planning Area 15;

- (g) the Tai Wai Maintenance Centre, with residential development above, in Planning Area 17;
- (h) the land for railway development;
- (i) the Sha Tin Water Treatment Works in Planning Areas 9 and 49;
- (j) the existing petrol filling stations at On Sum Street in Planning Area 11, Yuen On Street in Planning Area 14 and Tai Po Road in Planning Area 33, and two planned petrol filling stations in Planning Areas 16 and 68;
- (k) the sites proposed for business use in Planning Area 11;
- (l) Po Fook Hill in Planning Area 6;
- (m) Tao Fong Shan Christian Cemetery in Planning Area 6;
- (n) the amenity areas adjoining Po Fook Hill and Tao Fong Shan Christian Cemetery; **and**
- (o) the ~~proposed~~ waterfront amenity area in the area on the western side of Sha Tin Hoi (Tide Cove); **and**
- (p) the portals and the ancillary facilities of the Sha Tin Cavern Sewage Treatment Works in Planning Area 65.**

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

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

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

7.11.5 The site designated “OU” annotated “Columbarium” in Planning Area 6 (i.e. Po Fook Hill) is subject to GFA, site coverage and building height restrictions. The restrictions are necessary for the purposes of minimizing adverse visual, landscape, traffic and environmental impacts caused by columbarium development at the site. Minor relaxation of the stated restrictions may be considered by the Board on

application under section 16 of the Ordinance. Each proposal will be considered on its own merits.

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

7.12 Green Belt (“GB”) : Total Area ~~982.79~~ 979.65 ha

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

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

8. COMMUNICATIONS

8.1 Roads

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

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

8.2 Railway

8.2.1 Mass Transit Railway (MTR) East Rail Line

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

8.2.2 MTR Ma On Shan Line – Tai Wai to Wu Kai Sha

The Ma On Shan Line (MOS Line) provides a convenient passenger link connecting Ma On Shan with Tai Wai via the Sha Tin hinterland. There are interchange facilities with the existing East Rail in Planning Area 3 (Tai Wai), five stations in Sha Tin (Tai Wai, Che Kung Temple, Sha Tin Wai, City One and Shek Mun) and a Maintenance Centre at Tai Wai. There is potential for property development along the railway at the Tai Wai Station and Maintenance Centre, and Che Kung Temple Station.

8.2.3 *MTR Shatin to Central Link*

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

8.3 Public Transport

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

8.4 Ferry Services

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

8.5 Pedestrian and Cycle Networks

A special feature of the Area is a comprehensive system of walkways and cycle tracks, which links all major developments in the Area and provides

direct links with most of the open spaces. The system is segregated from the vehicular transport network by means of separate right-of-ways or grade-separated crossings.

9. UTILITY SERVICES

9.1 Water Supply

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

9.2 Sewage Treatment

Sewage generated in the Area is treated in the Sha Tin Sewage Treatment Works in Planning Area 47. The treated effluent is discharged to the Kai Tak Nullah through the Tolo Harbour Effluent Export Scheme. ~~*The construction work of the Sha Tin Sewage Treatment Works Stage III Extension has started in February 2001 and was completed in April 2012. The Sha Tin Sewage Treatment Works is to be relocated to cavern at Nui Po Shan in Planning Area 65. Upon the completion of project, the sewage generated in the Area will be treated in the underground sewage treatment works.*~~

9.3 Electricity

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

9.4 Town Gas

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

9.5 Telephone

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

10. CULTURAL HERITAGE

10.1 Old House at Wong Uk Village and Recorder House, Kowloon Reservoir are both Declared Monuments within the Area. There are graded historic buildings within the Area, namely the Tsang Tai Uk (Grade 1), Entrance Gate, Chik Chuen Wai, Tai Wai Tsuen (Grade 2), Nos. 5A, 5B, 5C and 6 Pai Tau (Grade 2), Tao Fong Shan Christian Centre (Grade 2), High Rock Christian Camp (Grade 2), Weir, Lower Shing Mun Reservoir (Grade 2), Che Kung Temple (Grade 2), Lam Ancestral Hall, Nos. 8, 10-14 Pai Tau (Grade 3), Ng Yuen (Grade 3), Dam and Supply Basin, Lower Shing Mun Reservoir (Grade 3), Nos. 1 and 3 First Street, Tai Wai (Grade 3), Nos. 33, 34, 36, 37, 38 and 39 Ha Wo Che (Grade 3), Yeung Ancestral Hall, Law Ancestral Hall and So Ancestral Hall in Hin Tin (Grade 3), Lau Ancestral Hall, Sha Tin Tau (Grade 3), Man Fat Din and Pagoda in Man Fat Tsz (Grade 3), Nos. 7-10 Sheung Wo Che (Grade 3) and No. 11 Kak Tin Village Third Street (Grade 3). On 19 March 2009, the Antiquities Advisory Board (AAB) released the list of 1,444 historic buildings, in which some buildings within the Area have also been given proposed gradings. The AAB also released a number of new items in addition to the list of 1,444 historic buildings. These items are subject to the grading assessment by the AAB. Details of the list of 1,444 historic buildings and its new items have been uploaded onto the official website of the AAB at <http://www.aab.gov.hk>. Prior consultation with the Antiquities and Monuments Office of the Leisure and Cultural Services Department should be made, if any development, redevelopment or rezoning proposal that might affect the above Declared Monuments, graded historic buildings, new items and their immediate environs.

11. IMPLEMENTATION

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

11.2 This Plan provides a broad land-use framework within which more detailed non-statutory plans for the Area are prepared by the Planning Department. These detailed plans are used within the Government as the basis for public works planning and site reservation. Disposal of sites is undertaken by the Lands Department. Public works projects are co-ordinated by the Civil Engineering and Development Department in conjunction with the client departments and the works departments, such as the Architectural Services Department and the Highways Department. In the implementation of the Plan, the Sha Tin District Council would be consulted as appropriate.

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

**TOWN PLANNING BOARD
DECEMBER 2016**

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ABBREVIATION

ADWF	Average Dry Weather Flow
AGS	Aerobic Granular Sludge
AHM	Artificial Hard Materials
ALARP	As Low As is Reasonably Practicable
ASRs	Air Sensitive Receivers
AQOs	Air Quality Objectives
C&D	Construction and Demolition
CAP	Contaminated Assessment Plan
CAR	Contamination Assessment Report
CAS	Conventional Activated Sludge
CCTV	Closed-Circuit Television
CEDD	Civil Engineering Development Department
CSTW	Cavern Sewage Treatment Works
DO	Dissolved Oxygen
DP	Designated Project
DSD	Drainage Services Department
EIA	Environmental Impact Assessment
EIAO	Environmental Impact Assessment Ordinance
EIAO-TM	Technical Memorandum on Environmental Impact Assessment Process
EM&A	Environmental Monitoring and Audit
ES	Executive Summary
FCZs	Fish Culture Zones
FSP	Fine Suspended Particulates
GB	Green Belt
HP	High Pressure
HRs	Human Receptors
IFAS	Integrated Fixed Film Activated Sludge System
IGEM	Institution of Gas Engineers and Managers
KTN	Kai Tak Nullah
LCA	Landscape Character Area
MBBR	Moving Bed Biofilm Reactor
MLE	Modified Ludzack-Ettinger
NCO	Noise Control Ordinance
NSR	Noise Sensitive Receiver
OVT	Old and Valuable Tree
OZP	Outline Zoning Plan
PME	Powered Mechanical Equipment
ProPECC PN 1/94	Professional Persons on Construction Site Drainage
QRA	Quantitative Risk Assessment
RAP	Remediation Action Plan
RR	Remediation Report
RSP	Respirable Suspended Particulates
SS	Suspended Solids
SSSI	Sites of Special Scientific Interest
STEPS	Sha Tin Effluent Pumping Station
STSTW	Sha Tin Sewage Treatment Works
TAP	Toxic Air Pollutant
TBM	Tunnel Boring Machine
THEES	Tolo Harbour Effluent Export Scheme
TIN	Total Inorganic Nitrogen
TM-DSS	Technical Memorandum on Standards for Effluents Discharged into Drainage and Sewerage Systems
TPEPS	Tai Po Effluent Pumping Station
TPSTW	Tai Po Sewage Treatment Works
TSP	Total Suspended Particulates
USEPA	US Environmental Protection Agency
UV	Ultra Violet Light
VSRs	Visually Sensitive Receivers

1 INTRODUCTION

1.1 Project Background

- 1.1.1 To support the social and economic development of Hong Kong, there is a pressing need to optimise the supply of land for various uses. Rock cavern development is a sustainable and innovative approach to do so. The Policy Agenda of the 2016 Policy Address has stated that works for the relocation of the Sha Tin Sewage Treatment Works (STSTW) is to commence as soon as possible for vacating the existing STSTW site for development purpose.
- 1.1.2 The existing STSTW, with a design sewage treatment capacity of 340,000 m³ per day, is the largest secondary sewage treatment works in Hong Kong serving Sha Tin and Ma On Shan. Relocating STSTW to caverns can release its existing site of about 28 hectares for other beneficial and more compatible uses. This will also enhance the living environment of the surrounding areas.
- 1.1.3 In November 2013, the Project Proponent, Drainage Services Department (DSD) consulted the Health and Environment Committee of the Sha Tin District Council on the findings and recommendations of the “Feasibility Study on Relocation of Sha Tin Sewage Treatment Works to Caverns”, and the Committee generally supported the Government to proceed with the investigation and design of the Project.
- 1.1.4 In September 2014, DSD appointed AECOM Asia Co Ltd. to carry out detailed investigation, design and construction supervision of the Project under Agreement No. CE 30/2014 (DS) “Relocation of Sha Tin Sewage Treatment Works to Caverns: Caverns and Sewage Treatment Works – Investigation, Design and Construction” (the Assignment).
- 1.1.5 The Project is a Designated Project (DP) under the Environmental Impact Assessment Ordinance (EIAO). An application for an Environmental Impact Assessment (EIA) Study Brief under section 5(1)(a) of the EIAO was submitted on 12 May 2014 with a Project Profile (No. PP-508/2014) for the Project. An EIA Study Brief (No. [ESB-273/2014](#)) was issued on 24 June 2014. An EIA for the Project was then undertaken, as part of the Assignment, in accordance with the EIA Study Brief and the Technical Memorandum on Environmental Impact Assessment Process (EIAO-TM).
- 1.1.6 A series of public consultation/engagement activities have been conducted to gather comments and views from the public on the Project since 2012. Activities organised include a public forum, focus group meetings, community group meetings, roving exhibitions, site visits to Stanley Cavern Sewage Treatment Works, demonstrations of de-odourisation equipment and physical models. These covered a broad spectrum of stakeholders including local residents and representatives, members of the District Council, professional bodies, environmental groups, the media and statutory bodies. Views collected during the public engagement activities have been taken into consideration in the feasibility study and investigation phases of the Project in formulating the design and arrangement. The Project Proponent would continue to engage the stakeholders and the public to enhance mutual understanding and thereby the efficaciousness of the Project.
- 1.1.7 The purpose of the EIA is to provide information on the nature and extent of environmental impacts arising from the construction and operation of the Project and associated works that will take place concurrently. This information will contribute to decisions by the Director of Environmental Protection on:
- The overall acceptability of any potential environmental consequences that are likely to arise as a result of the Project;
 - The conditions and requirements for the detailed design, construction, operation and associated works of the Project to mitigate against potential environmental consequences wherever practicable; and

- The acceptability of residual impacts after the proposed mitigation measures are implemented.

1.2 Purpose of this Executive Summary

1.2.1 The purpose of this EIA Executive Summary (ES) is to present the summary of the findings, conclusions and recommendations in the EIA Report prepared in accordance with the requirements of the EIAO. This ES contains the following information:

- [Section 2](#) presents purpose and nature of the Project;
- [Section 3](#) presents the consideration of alternative options for the site location, plant layout arrangement, plant design and construction methods;
- [Section 4](#) presents the key findings of environmental impacts;
- [Section 5](#) describes environmental monitoring and audit for the Project; and
- [Section 6](#) gives the conclusions.

2 PROJECT DESCRIPTION

2.1 Project Scope

2.1.1 The Project comprises the following components:

- (i) Construction of caverns at Nui Po Shan for housing the Sha Tin Cavern Sewage Treatment Works (CSTW);
- (ii) Construction of a secondary sewage treatment works including sludge treatment facilities inside the caverns, with a design capacity of 340,000 m³/day at average dry weather flow (ADWF);
- (iii) Construction of the main and secondary access tunnels and portals for access to the CSTW;
- (iv) Construction of ancillary facilities to the caverns, including ventilation system, fire services, safety measures, communication systems, utilities, etc;
- (v) Site formation and construction of ancillary facilities including a multi-storey administration building with laboratories, workshops, staff office, visitor facilities, etc, ventilation building, electrical substation, and other minor buildings and internal access road at the main portal located on A Kung Kok Street;
- (vi) Site formation and construction of ancillary facilities including a ventilation building, electrical substation and internal access road at the secondary portal located on Mui Tsz Lam Road;
- (vii) Construction of pipelines from the CSTW for connection to the existing emergency submarine outfall of the existing STSTW;
- (viii) Construction of new effluent tunnels and pipelines for the discharge of treated effluent from the relocated STSTW to the existing Tolo Harbour Effluent Export Scheme (THEES) tunnel;
- (ix) Associated slope stabilisation and natural terrain hazard mitigation and geotechnical works;
- (x) Landscaping and architectural works;
- (xi) Construction of a ventilation adit connecting the CSTW to a ventilation shaft located in Nui Po Shan, together with a surface access of around 500m length leading from the end of A Kung Kok Shan Road;
- (xii) Construction of a temporary project specific magazine at Nui Po Shan next to the location for the Ventilation Shaft, with access from A Kung Kok Shan Road, for storage of explosives for up to a few days' use for construction of the CSTW, and decommissioning of it after the completion of blasting works;
- (xiii) Operation and maintenance of the CSTW; and
- (xiv) Decommissioning and demolition of the existing STSTW.

2.1.2 [Figure No. 60334056/ES/1.01](#) shows the location and boundary of the Project. A 3-D view to better illustrate the CSTW with typical cross sections is shown on [Figure No. 60334056/ES/1.02](#). A preliminary layout plan of the proposed sewage treatment works in caverns is presented on [Figure No. 60334056/ES/1.03](#).

2.1.3 Following detailed population projection and flow assessment of the broad Sha Tin area, the design treatment capacity and effluent standards of the relocated STSTW have been set as follows, which would be the same as those of the existing STSTW:

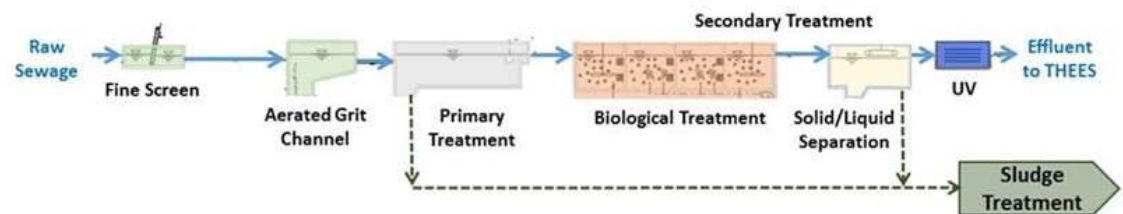
Design Treatment Capacity	340,000m ³ /day (ADWF)	
Determinand:	Percentile Standard	Upper Limit
Suspended Solids (mg/L)	30*	60
Biochemical Oxygen Demand (5 days, 20°C) (mg/L)	20*	40
Total Nitrogen (mg/L)	20#	35
Ammonia Nitrogen (mg/L)	5#	10

<i>E. coli</i> (count/100 mL)	1,000 [^]	15,000*
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Notes: * at 95-percentile
 # annual average
 ^ monthly geometric mean

- 2.1.4 In order to meet the required discharge quality standard, biological treatment will have to be provided. The sewage treatment process to be adopted for the CSTW will generally comprise the following components, but the detailed sequencing and configuration may vary from process to process (e.g. batch reactor processes may combine several functions in a single tank): (1) preliminary treatment including fine screening and grit removal; (2) primary treatment; (3) biological treatment; (4) solid/liquid separation; and (5) Ultra Violet Light (UV) disinfection. [Diagram 2.01](#) below presents a schematic flow diagram of the treatment process:

Diagram 2.01 Sewage Treatment Process Schematic Flow Diagram.



- 2.1.5 Sewage arriving at the inlet of the sewage treatment works will enter the preliminary treatment process, including mechanical bar screens and a grit removal system to remove large solid debris, sand and grit materials. Preliminarily treated effluent may then be directed to the primary treatment process where the suspended solids (SS) are settled out and removed as primary sludge. The primary effluent will then be conveyed to the biological treatment where micro-organisms will assimilate and remove pollutants in the sewage. Finally the secondary effluent will be disinfected by UV before discharge to the THEES tunnel.
- 2.1.6 A small portion of treated effluent, not exceeding 1,500 m³/day (0.4% of the design capacity of the CSTW), would be reused for non-potable uses including use in the laboratory, polymer solution preparation, irrigation and toilet flushing inside the CSTW. Before reuse, this treated effluent will undergo a polishing step based on membrane filtration and/or reverse osmosis to meet the required necessary design standard.
- 2.1.7 A temporary project specific explosive magazine, which consist of above ground single-storey structures, is proposed to be built on Nui Po Shan next to the location of the Ventilation Shaft. The magazine will be accessed from A Kung Kok Shan Road and used for short-term – in the order of a few days – storage of explosives that will be used for construction of the CSTW. The explosive magazine will be decommissioned after the completion of construction of caverns for the Project.
- 2.1.8 Under the context of EIA Study Brief No. [ESB-273/2014](#), the “Project”, as described above, is referring to the “Sha Tin Cavern Sewage Treatment Works” (CSTW). Any environmental impacts that may arise from future developments on the site of the existing STSTW after its decommissioning are outside and independent from the present EIA.

2.2 Need of the Project

There is a need to optimise the supply of land by sustainable and innovative approaches to support the social and economic development of Hong Kong. Relocating STSTW to caverns can release its present site for other beneficial uses.

2.3 Benefits of the Project

- 2.3.1 Upon relocation of the STSTW to caverns, 28 ha of land in Sha Tin with sea frontage can be released for re-development to meet the needs of the society.
- 2.3.2 The living environment of the surrounding area would be improved. The common potential impacts of a sewage treatment works, particularly odour and visual impacts, can be very effectively controlled and minimised. Odour management of the STSTW would be greatly enhanced since the caverns would serve as very effective natural barriers.
- 2.3.3 Advanced technologies can be adopted for the new sewage treatment facilities to enhance operation process performance, resilience and reliability, as well as operation efficiency.
- 2.3.4 Subject to subsequent planning, the released STSTW site will provide opportunities for developing a green and vibrant waterfront living environment with ample open space, a continuous promenade and recreational facilities such as amenity areas, cycle tracks and other leisure purposes could be created.
- 2.3.5 The development opportunities of the surrounding area adjacent to the existing STSTW site would be enhanced after completion of the Project and the accessibility of the area would be improved by improving transport infrastructure at the area.
- 2.3.6 The project location is rich in granite. Excavation of caverns will produce a large amount of hard granitic rocks, which are valuable natural resources for construction use. Rocks produced under this Project would become a local source to support the construction industry.

2.4 Project Programme

The Project construction works are anticipated to commence in 2018 with completion of the Project by 2028.

2.5 Summary of Designated Projects

- 2.5.1 The Project components that constitute a DP under the EIAO are listed as follows:
- DP1 – Sewage treatment works with an installed capacity of more than 15,000 m³ per day under Item F.1 in Schedule 2 Part I;
 - DP2 – Sewage treatment works under Item F.2 in Schedule 2 Part I---
 - With an installed capacity of more than 5,000 m³ per day; and
 - A boundary of which is less than 200m from the nearest boundary of an existing or planned residential area, educational institution and health care institution.
 - DP3 – An activity for the reuse of treated sewage effluent from a treatment plant under Item F.4 in Schedule 2 Part I;
 - DP4 – Underground rock caverns under Item Q.2 in Schedule 2 Part I;
 - DP5 – An explosives depot in a stand-alone, purpose built building under Item K.10 in Schedule 2 Part I; and
 - DP6 – Decommissioning of an explosives depot under Item 11 in Schedule 2 Part II.

2.6 Concurrent Projects

- 2.6.1 Nine concurrent projects in the vicinity of the Project site are identified and their cumulative impacts have been assessed. Amongst the identified concurrent projects, it is found that the following two concurrent projects will have cumulative impacts on this Project. It should be noted that the status of these concurrent projects is based on the available information at the time of submission of this Report and the implementation of individual projects would be subject to further development and subsequent actions of the respective project proponents.
- (a) Proposed works for Upstream Sewerage Facilities for the Relocation of Sha Tin Sewage Treatment Works – this is a DSD project and include construction of a new pumping station and modification of existing pumping stations as well as sewerage works in order to convey sewage to the CSTW for treatment. All works are expected to start at 2021 for completion in 2026.
 - (b) Tolo Harbour Sewerage of Unsewered Areas, Stage II - This project covers the provision of sewerage to a number of unsewered areas in Sha Tin. Works are on-going and expected to be completed by 2020.

3 CONSIDERATION OF ALTERNATIVE OPTIONS

The design of the Project has undergone a detailed evaluation of different arrangement to arrive at the optimum planning, engineering and environmental solutions which fit together in a coherent manner. The following sections summarise the evaluation criteria and the consideration of various alternative options.

3.1 Consideration of Alternative Site Locations

Consideration of Alternative Sites

- 3.1.1 When conducting the review of the proposed relocation site, five areas adjacent to the existing STSTW were identified and evaluated. These five areas are: Nui Po Shan at A Kung Kok, Shek Mun, Ma On Shan, Kau To Shan South and Kau To Shan North.
- 3.1.2 The review confirmed that Nui Po Shan is the preferred site for the relocation of the STSTW. To sum up, the Nui Po Shan site has the following merits and is more favorable than the others:
- The geology of this area, belonging to hard granite with no obvious weak zones and faults, is most suitable for construction of large caverns;
 - This area is located in the proximity of the existing STSTW and THEES effluent export tunnel which conveys the treated effluent from the STSTW to Kai Tak Nullah (KTN) (Kai Tak River after completion of re-construction and upgrading works) in Wong Tai Sin for discharge. As such, relocating the STSTW to this area will minimise the disturbance to the whole Sha Tin District, reducing the extent of construction works due to modification of upstream sewerage and shortening the construction period;
 - No private land resumption is needed; and
 - This area is close to Ma On Shan Road. With appropriate measures, the traffic impact due to the relocation of the STSTW is the minimum.
- 3.1.3 Although the direct environmental impacts related to all five areas are similar, suitable geology and close to existing high-speed road in Nui Po Shan Sites will shorten the construction period and haul route that will also have less indirect environmental impacts than other options.
- 3.1.4 Furthermore, the position and orientation of the CSTW will avoid encroaching into the boundaries of Ma On Shan Country Park and Mui Tsz Lam and Mau Ping Priority Sites for Enhanced Conservation.

3.2 Consideration of Alternative Plant Layout Arrangement

Consideration of Supporting Facilities Locations

- 3.2.1 There are two options in locating the supporting facilities: (1) at both Main Portal and Area 73, or (2) at the Portals only. Option 1 was the original arrangement proposed in the Feasibility Study Stage to limit the extent of site formation works at the portal area. However, this option will take up a considerable area of Area 73 reducing the versatility of the site. Furthermore, the connectivity with the CSTW and operation effectiveness is affected. Considering the demerits of Option 1, Option 2 was developed and aimed to relocate the facilities in Area 73 under Option 1 to the Main Portal as well. The extent of site formation works in Option 2 will increase. In return, connectivity among the facilities, buildings and the sewage treatment works is much improved. The portal area will be flexibly utilised by

integration of the sewage treatment works ancillary facilities with the THEES Tunnel Portal. Area 73 will not need to be reserved for any permanent facility of the CSTW.

Consideration of Ventilation Shaft Locations

- 3.2.2 Different options have also been considered in determining the location of the ventilation shaft. The Feasibility Study Stage has originally proposed the ventilation shaft to be located at the south-west corner of the CSTW. The outlet of the ventilation shaft will be at an uphill area at approximately 240mPD and is far from all major residential developments and villages, the closest one being more than 700m away on plan. On the other hand, to allow construction of the ventilation shaft, an access road approximately 1,200m in length leading from the upper end of A Kung Kok Shan Road will need to be laid. The ventilation shaft location was then revised in subsequent design development, and lies approximately 500m to the south-west of the original location. It is also very remote from all major residential developments and villages, the closest one being more than 1,000m away. The outlet of the ventilation shaft will be in an uphill area at approximately 180mPD. At this location, the access road leading from the top end of A Kung Kok Shan Road can be much shortened to about 500m in length, which will generate less soft spoil and require less tree felling. Odour impact assessment indicates that residual odour impacts from both options are minimal and are in full compliance with the EIAO-TM requirements. In view of the shorter access road consequently less volume of construction works for the shaft and tree felling, the revised location is therefore considered preferable.

Consideration of Alternative Emergency Outfall Options

- 3.2.3 Under normal operation, treated effluent from the relocated STSTW will be conveyed by the THEES effluent tunnel for ultimate discharge into Victoria Harbour. In other or emergency situations, same as for the existing STSTW, an emergency outfall is needed for bypass of treated or partially treated effluent to Tolo Harbour. Various options of an emergency outfall for the relocated STSTW have been considered, namely (1) continued utilization of the existing emergency submarine outfall, (2) construction of a new emergency submarine outfall and (3) construction of a new seawall outfall. After evaluation, Option (1) should have the best water quality performance during the operation stage because its location will have the best effluent dispersion effect during emergency bypass. The connection pipes to the existing outfall would be constructed by trenchless method so that no disturbance to marine or riverbed sediments would be induced. This option makes the most use of the existing facilities and involves the least amount of works and will incur the least environmental impact in terms of marine ecology and water quality during construction. Hence, Option (1) is the most favourable.

3.3 Consideration of Alternative Plant Design

Consideration of Alternative Treatment Level

- 3.3.1 The treatment level of a sewage treatment work is dependent on its environmental settings and the mode of discharge. The aim is to achieve satisfactory water quality meeting relevant stipulations. The level of treatment of a sewage treatment work will determine the effluent quality, and the mode of discharge will affect the subsequent processes including dilution, dispersion and diminution of any residual pollutants. Hence for a given environmental setting, the treatment level and the mode of discharge are closely related – a lower treatment level will require a better mode of discharge, e.g. a longer submarine outfall, and vice versa.
- 3.3.2 The treatment level of the existing STSTW is secondary plus disinfection, and is able to fulfil the relevant water quality requirements. For the relocated STSTW, maintaining the treatment level the same as that of the existing STSTW will result in a water quality at least not inferior to the present situation. Raising the treatment level to tertiary treatment will give higher quality effluent but at the same time will incur significantly higher construction

and operation costs. On the other hand, a lower treatment level will result in a lower water quality in the receiving waters.

- 3.3.3 The whole Sha Tin District adopts seawater flushing. Switching the use of seawater to treated effluent will require a higher level of treatment than secondary to meet flushing water standard, with much higher construction and operation costs, as well as operation power consumption owing to the additional treatment processes. The benefits, nonetheless, are not apparent as such a switching will not give rise to conservation of freshwater resources.
- 3.3.4 In light of the adequacy of the current treatment level in meeting water quality requirements, it is both environmentally and economically acceptable to maintain the current level of secondary treatment plus disinfection for the CSTW.

Consideration of Alternative Treatment Processes

- 3.3.5 In order to meet the required discharge quality standard, biological treatment will have to be provided. The sewage treatment process employed in the existing STSTW is the Modified Ludzack-Ettinger (MLE) process, a relatively conventional activated sludge technology based solely on suspended growth, which has a lot of operation experience locally. This Conventional Activated Sludge (CAS) is one of the options for the sewage treatment process for the CSTW.
- 3.3.6 There are other technologies available that, by making use of attached growth or granular forms of activated sludge, will reduce the required hydraulic retention time and thus give an overall more compact process than CAS. For the purpose of discussion here these will be called Compact-type technologies. They include the Moving Bed Biofilm Reactor (MBBR); Integrated Fixed Film Activated Sludge System (IFAS); the Aerobic Granular Sludge (AGS), etc.
- 3.3.7 Both CAS and the Compact-type technologies will provide secondary biological treatment capable of achieving the required effluent standards when coupled with UV disinfection. In terms of environmental impact there is no significant difference in the nature of impacts between the two options. On the other hand, owing to higher tankage volume, CAS will involve a considerably larger volume of excavation works and higher construction period during which environmental impacts will be generated. Hence Compact-type technologies are the preferred option.

Consideration of Alternative Sludge Treatment Process

- 3.3.8 Sludge from the future CSTW will be conveyed to the Sludge Treatment Facility in Tuen Mun for incineration, similar to the arrangement for the existing STSTW. Prior to conveyance to the Sludge Treatment Facility, a number of alternative handling options are considered:
- Dewatering with prior anaerobic digestion, with digesters located inside the caverns
 - Dewatering with prior anaerobic digestion, with digesters located outside the caverns
 - Direct Dewatering without digestion
- 3.3.9 Anaerobic digestion would reduce the volume of the sludge to be disposed of to the Sludge Incineration Facility, and allow the recovery of heat and energy from the biogas generated for utilization in the sewage treatment works. Yet as biogas is inflammable, its generation inside caverns is as a matter of principle not acceptable under the prevailing fire safety policy. Open-top design (i.e. the top of the digester protrudes above the hill surface) is not viable for the Project owing to the CSTW being located deep under the steep topography of Nui Po Shan.

- 3.3.10 The available space at the cavern portal area is very limited and is not sufficient to accommodate any sludge digestion facilities in addition to the other necessary supporting facilities of the CSTW. Extensive site formation including substantial setting back of the existing green belt area would be required if space sufficient for the sludge digestion facilities is to be made available. This, however, would cause significant adverse environmental impact in terms of tree felling, significantly increased geotechnical and slope stabilisation works, additional excavated materials to be disposed as well as noise and air emission due to the additional excavation works.
- 3.3.11 In view of the issues arising from the inclusion of anaerobic digestion at the relocated STSTW, either inside or outside the caverns, direct dewatering option is the most feasible option for this Project.

Consideration of Alternatives to Minimise Emergency Discharges

- 3.3.12 In the relocated STSTW, sufficient standby units will be provided for all major treatment units and Electrical and Mechanical (E&M) equipment to cater for equipment breakdown and maintenance needs, which in turn will minimize the risk of inadequately treated effluent or emergency discharge. Dual power supply from two separate electrical sub-stations will be arranged in order to further minimise any possible disruption to operation due to suspension of power supply. Furthermore, commissioning of the relocated STSTW is planned to be carried out in stages. A portion of the total flow will first diverted to the relocated plant to enable the treatment process to be tested, refined and adjusted to the required performance before the remaining sewage is diverted to the relocated STSTW.

3.4 Consideration of Alternative Construction Methods and Sequence of Works

Construction Methods for Tunnels and Caverns

- 3.4.1 The main construction activities of the Project are excavation of tunnels and caverns. Based on the geological profile, it is envisaged that excavation will be mostly carried out in good quality granitic rock mass. They are typically excavated by either drill-and-blast or by Tunnel Boring Machine (TBM) methods. Other forms of excavation such as mechanical and chemical splitting are not cost effective except for either small volume of excavation or at locations where blasting would pose too great nuisance or be hazardous. The environmental impacts due to drill-and-blast and TBM are similar as the construction of caverns is basically carried out underground. However, TBM has certain limitations such as technical impracticality and thus non-availability beyond a certain size, difficulties in coping with changes in cavern levels and geometry along the treatment process trains, the need of a considerable launching space, etc., which render it not the most effective solution for this Project. For the construction of access tunnels and process caverns, drill-and-blast method would also suit the nature and scale better than TBM. On the other hand, for laying of pipes using trenchless method, TBM of smaller size is considered as an appropriate method.

Consideration of Alternative Temporary Explosive Magazine Arrangements

- 3.4.2 The scenario of not having an on-site temporary magazine has been considered. Under such a situation, explosives availability at the works fronts will be dependent totally upon explosives delivery by the Mines Division of Civil Engineering and Development Department (CEDD), which normally is limited to once per day and in any case would be subjected to resources limitations of the Mines Division. For a project with multiple large-scale caverns like the CSTW, this will pose a serious constraint on the construction programme and unnecessarily prolong the construction period, with a significant delay in realizing the environmental benefits of the relocation Project. This scenario is therefore undesirable in environmental aspects. The option of shared use of other existing magazine sites with other contracts have also been considered. However, there are actually very few such magazines, and all of them are subject to different constraints or uncertainties which make this option infeasible. A much more environmentally sound and technically viable

alternative is the provision of a temporary on-site explosives magazine. The future CSTW complex will comprise a vertical ventilation shaft opening to a remote uphill area on Nui Po Shan. Construction of the shaft will necessitate the installation of an access road from the upper end of A Kung Kok Shan Road. Adjacent to the location of the ventilation shaft opening is a small flat area. This is considered a very suitable site for the temporary explosives magazine, as it is remote from most population and the community.

- 3.4.3 To ensure the security during storage of explosives, security fences complete with overhang covered in barbed wire will be installed around the store. Security guards will be on duty 24 hours and only registered authorised persons will be allowed to enter the compound. Furthermore, a Closed-circuited Television (CCTV) system will be installed to provide 24 hours surveillance and video recording.

Construction Methods for THEES Connection Works

- 3.4.4 The current arrangement of discharging STSTW treated effluent to KTN through the THEES tunnel would be maintained after the relocation. To convey the treated effluent of the future CSTW to the tunnel, two options have been considered:

- Option 1: the connection point will be outside the THEES tunnel at its Sha Tin portal. A short section of tunnel will be constructed between the CSTW and the THEES tunnel inlet chamber.
- Option 2: the connection point will be at a point along the THEES tunnel several hundred metres downstream of its Sha Tin portal.

- 3.4.5 Both Options will inevitably require temporary suspension of the THEES tunnel at certain times for constructing the connection, during which treated effluent in the THEES will be temporarily bypassed into Tolo Harbour. For Option 1, the connection works involve modifications to the existing inlet chamber to the THEES tunnel; while for Option 2, the connection will involve breaking into the existing THEES tunnel for a T-junction and making good the tunnel lining afterwards. Both the number of times and duration of temporary suspension will be less for Option 1 than Option 2. Option 1 is therefore the preferred alternative. Furthermore, it is assessed that the connection works of Option 1 can be split into a number of steps for synchronized implementation with THEES maintenance, thereby avoiding the need for additional temporary suspension of the THEES.

4 KEY FINDINGS OF THE ENVIRONMENTAL IMPACT ASSESSMENT (EIA)

4.1 Approach to the EIA

4.1.1 The EIA process provides a means of identifying, assessing and reporting the environmental impacts associated with the construction and operation of the Project based on the engineering design information available at this stage. It is an iterative process that has been followed in parallel with the design process to identify the potential environmental effects of various design options, and develop alternatives as well as mitigation measures to be incorporated into the design, construction and operation of the Project. Feedbacks and advices obtained from various public engagement activities have been considered and incorporated into the design and EIA process where appropriate. The Project Proponent has also come up with measures that can avoid some potential environmental impacts, while others are minimized or mitigated to acceptable levels.

4.1.2 The findings of this EIA study have determined the likely nature and extent of the following environmental impacts predicted to arise from the construction and operation of the Project:

- Air Quality Impact;
- Noise Impact;
- Water Quality Impact;
- Land Contamination;
- Hazard to Life;
- Ecology Impact (Terrestrial and Marine);
- Fisheries Impact;
- Landscape and Visual Impacts;
- Cultural Heritage Impact;
- Waste Management Implications; and
- Health Impact.

4.2 Air Quality Impact

Assessment Scope and Key Criteria

4.2.1 Potential air quality impacts associated with the construction and operational phases of the project have been assessed in accordance with the criteria and guidelines as stated in the requirements given in Section 3.4.1 and Appendix B of the EIA Study Brief, as well as Annex 4 and Annex 12 of the EIAO-TM. The assessment area for construction dust impact assessment is within 500m from the boundary of the Project site. Regarding operational odour impact by CSTW, potentially affected air sensitive receivers (ASRs) are generally identified within 500m study boundary from the ventilation shaft, portal facilities and CSTW. In light that odour is a key concern of the local community, ASRs outside the 500m study boundary are also identified to investigate the impact in a longer range.

Construction Phase

4.2.2 Potential air quality impacts from the construction works (including construction of CSTW and demolition of existing STSTW) of the Project would mainly be related to construction dust from excavation, materials handling, spoil removal and wind erosion. Quantitative fugitive dust assessments have been conducted, taking into account the cumulative impact caused by nearby concurrent sources within 500m from the boundary of the Project site. With the implementation of mitigation measures specified in the Air Pollution Control (Construction Dust) Regulation together with the recommended dust suppression measures including watering 8 times a day on active works areas, exposed areas and unpaved haul roads, using dust collector with 99% removal efficiency for rock crusher and adopting good site practices, and Environmental Monitoring and Audit (EM&A) programme, the predicted dust impact at ASRs (locations of ASRs refer to [Figure No. 60334056/ES/4.01](#)) would comply with the hourly, daily and annual particulate criteria stipulated in the Air Quality Objectives (AQOs) and EIAO-TM. The predicted cumulative 1-hour average Total Suspended Particulates (TSP), daily and annual average Respirable

Suspended Particulates (RSP), daily and annual average Fine Suspended Particulates (FSP) are summarised in [Table 4.1](#) and [Table 4.2](#) below.

Table 4.1 Summary of predicted construction dust levels (in $\mu\text{g}/\text{m}^3$) at representative air sensitive receivers during construction of relocated STSTW

	TSP	RSP		FSP	
	Max. 1-hour	24-hour (10th highest)	Annual	24-hour (10th highest)	Annual
Concentrations at ASR (Unmitigated)	248 – 14,458	75 - 443	38 - 55	55 - 118	26 - 34
Concentrations at ASR (Mitigated)	132 - 471	72 - 100	37 - 41	53 - 60	26 - 29
Criteria	500	100	50	75	35

Table 4.2 Summary of predicted construction dust levels (in $\mu\text{g}/\text{m}^3$) at representative air sensitive receivers during demolition of existing STSTW

	TSP	RSP		FSP	
	Max. 1-hour	24-hour (10th highest)	Annual	24-hour (10th highest)	Annual
Concentrations at ASR (Unmitigated)	228 – 4,567	74 – 221	37 - 45	55 – 68	26 – 29
Concentrations at ASR (Mitigated)	132 - 491	72 - 85	37 - 41	53 - 59	26 - 29
Criteria	500	100	50	75	35

Operational Phase

4.2.3 Potential air quality impacts during operational phase would come from odour emission from the ventilation shaft of the CSTW (locations of ASRs refer to [Figure No. 60334056/ES/4.02](#)). Cavern is an effective natural barrier and the sewage treatment facilities which would pose odour emission would be enclosed. Odour emitted from these enclosed sewage treatment facilities would all be treated in the deodourizing units with odour removal efficiency of 80 – 97% before venting to the ambient via the ventilation shaft which is located at a remote area on Nui Po Shan. In addition, negative pressure would be applied inside caverns preventing the odour leakage through the access tunnels. Odour management of the sludge transportation would also be enhanced.

4.2.4 With the implementation of odour control measures, the odour impact assessment results show that the predicted odour concentration at all ASRs located in the vicinity of CSTW would comply with the odour criterion (5 odour units based on an averaging time of 5 seconds) stipulated in the EIAO-TM. The Project is considered to have considerable improvement on the air quality condition at the Study Area as comparing with the situation with the operation of existing STSTW.

4.3 Noise Impact

Assessment Scope and Key Criteria

4.3.1 Potential noise impacts associated with the construction and operational phases of the project have been assessed in accordance with the criteria and guidelines as stated in the requirements given in Section 3.4.2 and Appendix C of the EIA Study Brief, as well as Annex 5 and Annex 13 of the EIAO-TM. The study area for noise impact assessment is defined by a distance of 300m from the site boundary of the Project.

Construction Phase

- 4.3.2 Construction airborne noise is expected from the use of Powered Mechanical Equipment (PME) during various construction activities, such as excavation, concreting, compaction works, demolition activities, material handling activities etc, at all land-based works areas including the existing and relocated STSTW, improvement measures at A Kung Kok Street, alternative accessed to and from the relocated STSTW and temporary explosives magazine site at A Kung Kok Shan. Noise impact arising from construction activities of the Project is assessed. The predicted maximum unmitigated construction airborne noise levels at the representative Noise Sensitive Receivers (NSRs) (locations refer to [Figure No. 60334056/ES/4.03](#)) in the vicinity of the Project work sites would be 70 – 89 dB(A). With the implementation of all practicable mitigation measures including adoption of quiet PME, use of movable noise barrier/acoustic mat, and limitation of the number of on-time operating PMEs within 120m of the Neighbourhood Advice-Action Council Harmony Manor during construction of the access road to temporary magazine site, the predicted maximum construction airborne noise levels at the representative NSRs in the vicinity of the Project work sites would comply with the EIAO-TM criteria of 75 dB(A) for residential NSRs and 70 dB(A) for educational NSRs during normal teaching hours (65 dB(A) during examination period) except occasional exceedance of noise criterion for examination period by 1 dB(A) at S.K.H. Ma On Shan Holy Spirit Primary School during examination period in January and June 2021, January and June in 2022, and January 2023. As this NSR is located in close vicinity of the construction work areas, all practical mitigation measures have been exhausted. With reference to the latest examination schedule of this school, the affected period would be limited to 3 days in each affected examination month. In addition, the affected educational NSR has been noise insulated with air conditioners. It is therefore considered that the residual noise impact is in short term period and could be significantly reduced by keeping the windows closed during the affected examination periods. To further reduce the noise impact, it is recommended that the Contractor should closely liaise with the schools to avoid scheduling the noisy construction works during examination period as far as practicable.
- 4.3.3 During the actual construction period, as much as practically possible, measures should be done to reduce the construction noise, and on-going liaison with all concerned parties and site monitoring should also be conducted during the course of the construction period. A construction noise EM&A programme is recommended to check the compliance of the noise criteria during normal daytime working hours.
- 4.3.4 Ground-borne construction noise impacts pertinent to the use of hydraulic breaker, hand-held breaker, drill rig and TBM would comply with criteria of EIAO-TM. The predicted maximum construction ground-borne noise levels associated with the PME use at open works areas at the representative NSRs (locations of NSRs refer to [Figure No. 60334056/ES/4.04](#)) in the vicinity of the work sites would be 40 – 53 dB(A), hence comply with the EIAO-TM criterion. No adverse ground-borne construction noise impacts is predicted and therefore no noise mitigation measure and noise monitoring are proposed.
- 4.3.5 For the temporary modification works at the merging point of Ma On Shan Road and temporary access haul road, the provision of 220m length of noise barrier of a height at 10mPD on the temporary access haul road to replace the existing 150m length of noise barrier at 9.2mPD to 10mPD height on Ma On Sha Road would pose negligible difference in the overall traffic noise level at the sensitive facades in the vicinity. Once the construction work is completed, the noise barrier on the concerned road section of Ma On Shan Road would be re-installed according to the existing configuration.

Operational Phase

- 4.3.6 The noise impact associated with the operation of the Project has been assessed. The predicted fixed plant noise levels at the representative NSRs (locations of NSRs refer to [Figure No. 60334056/ES/4.03](#)) would comply with the criteria based on the plant design information provided by the Engineer at the time of the assessment. If there is any change in engineering design information during detailed design stage or fitting-out stage, the fixed source noise design should be reviewed by the Engineer/Contractor to ensure that both the Noise Control Ordinance (NCO) and EIAO-TM criteria at the NSRs can be met in the future. Prior to the operational phase of the Project, a commissioning test for the equipment in ventilation buildings, the ventilation shaft, ventilation fan for chiller plant room and cooling tower at the administration building would be conducted to ensure compliance with the relevant allowable maximum sound power levels.

4.4 Water Quality Impact

Assessment Scope and Key Criteria

- 4.4.1 The Study area for water quality impact assessment covered the Victoria Harbour Water Control Zone (WCZ) and Tolo Harbour and Channel WCZ as designated under Water Pollution Control Ordinance (WPCO), including inland water bodies within 500m from the site boundary. Key assessment criteria include Annexes 6 and 14 of the EIAO-TM, Water Quality Objectives (WQO) for Victoria Harbour WCZ and Tolo Harbour and Channel WCZ, Hong Kong Planning Standards and Guidelines, Water Supplies Department (WSD) target seawater quality objectives, Technical Memorandum on Standards for Effluents Discharged into Drainage and Sewerage Systems, Inland and Coastal Waters (TM-DSS), Practice Note for Professional Persons on Construction Site Drainage (ProPECC PN 1/94), Section 3.4.3 and Appendix D of the EIA Study Brief.

Representative Sensitive Receivers

- 4.4.2 In Victoria Harbour WCZ, major Water Sensitive Receivers (WSRs) identified are WSD flushing water intakes, cooling water intakes, typhoon shelters and potential water sports area at Kai Tak. In Tolo Harbour and Channel WCZ, major WSRs identified are marine water including flushing water intakes, cooling water intake, bathing beach, typhoon shelter, corals, mangroves, Fish Culture Zones (FCZs), Sites of Special Scientific Interest (SSSI) and nursery area for commercial fisheries resources; inland water bodies within 500m from the site boundary including Shing Mun River, Ma Tai Stream, and streams along Mui Tsz Lam Road and in Nui Po Shan, water gathering grounds as well as secondary contact recreation subzone for water recreational uses.

Construction Phase

Land-based Construction

- 4.4.3 Minor water quality impact would be associated with land-based construction. Impacts may result from surface runoff, accidental spillage, sewage from on-site construction workers and groundwater infiltration. Impacts could be controlled to comply with the WPCO standards by implementing the recommended mitigation measures.

THEES Connection Works

- 4.4.4 Both the Tai Po Sewage Treatment Works (TPSTW) and existing STSTW are secondary treatment plants with disinfection process. Under normal operation of the THEES, the Tai Po Effluent Pumping Station (TPEPS) would pump the secondarily treated and disinfected effluent from TPSTW via a rising main and a submarine pipeline to the Sha Tin Effluent Pumping Station (STEPS). The STEPS would receive the secondarily treated and disinfected effluent from both TPSTW and STSTW for combined discharge to the KTN in the Victoria Harbour WCZ via the THEES effluent tunnel.

- 4.4.5 In order to maintain the current arrangement in discharging effluent to KTN through THEES tunnel, the provision of a dry construction zone within the THEES tunnel to allow connection from the CSTW would be essential for the Project. During the connection works, the THEES Tunnel needs to be temporarily suspended from its normal operation with effluent bypass into the Tolo Harbour.
- 4.4.6 To minimize water quality impact to Tolo Harbour, the necessary THEES connection works required for this Project will be split into a number of steps for sequential and synchronized implementation with THEES maintenance, thereby avoiding the need for additional temporary suspension of the THEES. Each suspension will not be longer than 4 weeks and will be outside the algae blooming season (January to May), and the frequency will be no more than once per year during the construction phase of the Project. Therefore, no additional water quality effect on the Tolo Harbour waters would result from the proposed THEES connection works. No cumulative or residual impact would be expected during the construction phase of the Project with the recommended mitigation measures properly implemented.

Operational Phase

- 4.4.7 The CSTW effluent together with the TPSTW effluent will be discharged to the Victoria Harbour via the THEES during normal operation. Compared with the existing STSTW, the CSTW has the same design flow capacity and effluent standard. Hence, this Project will not induce any change to the flow and loading of THEES effluent to the Victoria Harbour.
- 4.4.8 Maintenance of the THEES tunnel is required to ensure proper functioning and integrity of the tunnel. During the inspection or maintenance of the THEES tunnel, temporary suspension of the normal THEES operation with effluent bypass into the Tolo Harbour is unavoidable in order to provide a safe and dry zone within the THEES tunnel. It should be noted that such temporary effluent bypass during THEES maintenance is part and parcel of the existing THEES regardless of whether the Project is implemented or not.
- 4.4.9 Mathematical modelling was undertaken under this EIA to study the water quality impact arising from a 4-week THEES maintenance discharge. The model results indicated that even for such a discharge in the algae blooming season (January to May) under the ultimate development scenario, the increase in pollution level in Tolo Harbour would still be transient and reversible.
- 4.4.10 With the design capacity, effluent standards and effluent discharge points being the same as those of the existing STSTW, this Project will not change the flow, load and discharge point of the THEES effluent to Victoria Harbour and Tolo Harbour.
- 4.4.11 In order to further minimize water quality impact, it is recommended under this Project to schedule the THEES maintenance outside the algae blooming season (January to May). Water quality modelling indicates that the pollution elevation in Tolo Harbour and the associated recovery period would be significantly reduced and alleviated as compared to the case of inside the algae blooming season (January to May). An event and action plan and a water quality monitoring programme (presented in the standalone EM&A Manual) is proposed for the THEES maintenance events during both construction and operational phases to minimize water quality impacts.
- 4.4.12 A contingency plan has also been formulated to minimize the impact of emergency discharges and facilitate subsequent management of the situation. An event and action plan and a water quality monitoring programme (as presented in the standalone EM&A Manual) is also proposed for the emergency discharge events during operational phase to minimize the water quality impacts. No cumulative or residual impact is expected during the operational phase of the Project with the recommended mitigation measures properly implemented.

4.5 Land Contamination

- 4.5.1 The land contamination assessment is conducted in accordance with the criteria and guidelines as stated in the requirements given in Section 3.4.4 and Appendix F of the EIA Study Brief, as well as Annex 19 of the EIAO-TM.
- 4.5.2 Based on the site appraisal, within the Project boundary, the existing STSTW and the temporary works area on Area 73, currently part of a Vehicle Detention Centre, are considered to be areas with potential land contamination concerns.
- 4.5.3 A sampling and testing programme, targeting the existing STSTW and the temporary works area on Area 73, has been proposed. Since the sites will continue to be in use until the full commissioning of the relocated STSTW, the proposed Site Investigation works and any necessary remediation action are recommended to be carried out after decommissioning of the existing STSTW and when the Area 73 temporary works area is vacated, but prior to re-development.
- 4.5.4 In addition, two sites (the David Camp and proposed A Kung Kok Shan Road surface magazine site) within the Project boundary are inaccessible or yet to be constructed. Further site walkover is recommended within the sites when access to the camp site is available and before the decommissioning of the surface magazine site to confirm the presence of any land contamination. If land contamination were present, detailed land contamination assessment and remediation would be required prior to the re-development.
- 4.5.5 Further site walkover, assessment and remediation (if necessary), including the submission of Supplementary Contamination Assessment Plan (CAP(s)), Contamination Assessment Report/ Remediation Action Plan (CAR(s)/RAP(s)) and Remediation Report (RR(s)) would follow Environmental Protection Department's prevailing guidelines and recommendation in the EIA Study.
- 4.5.6 With the implementation of further site walkover, land contamination assessment and, if required, remediation works for the Project Site, any soil/groundwater contamination would be identified and properly treated prior to re-development. Land contamination impacts are therefore considered surmountable to future occupants.

4.6 Hazard to Life

- 4.6.1 The hazard to life assessment is conducted in accordance with the criteria and guidelines as stated in the requirements given in Section 3.4.5 and Appendix G of the EIA Study Brief, as well as Annex 4 of the EIAO-TM.

Storage, Transport and Use of Explosives

- 4.6.2 As discussed in [Section 3.4.1](#) of this ES, to ensure the timely completion of the Project, Drill-and-Blasting method for rock excavation is proposed. As further discussed in [Section 3.4.2](#) of this ES, in view of the large quantity of rock to be excavated, the provision of a temporary magazine would provide a more reliable explosive supply, allow flexible blasting time and multiple faces under different excavation sequence and give maximum tunnel production rates. A Quantitative Risk Assessment (QRA) for the storage, transport and use of explosives relates to the construction stage of the Project has been carried out. Since no explosives will be handled during the operational stage, no QRA would be conducted for the operational stage.
- 4.6.3 A robust site selection process has been undertaken for the proposed temporary magazine. A surface-type magazine is proposed to be constructed at the location next to the proposed ventilation shaft with access from the end of A Kung Kok Shan Road. The criteria of the EIAO-TM for Individual Risk will be met. The assessment results show that the Societal Risk lies within the "As Low As Reasonably Practicable (ALARP)" region in respect of the criteria stipulated in Annex 4 of the EIAO-TM. All practicable mitigation measures have

been identified, including the use of cast boosters and reduction of explosives quantities to be transported in each trip. The cost effectiveness of each justifiable mitigation measure has been assessed. The results show compliance with the ALARP principles and Risk Guidelines (EIAO-TM Annex 4) provided recommendations are implemented.

High Pressure (HP) Underground Town Gas Transmission Pipelines

- 4.6.4 The transport route of explosives is close to an HP underground town gas transmission pipeline. A QRA has therefore been conducted to assess the increased societal risk arising from the incremental population during both construction and operational phases of the Project. The individual risk complies with both the Hong Kong Risk Guidelines and the Institution of Gas Engineers and Managers (IGEM) Risk Guidelines. The societal risk lies in the lower “ALARP” region of the Hong Kong Risk Guidelines for both construction stage and operational stage scenarios. Compared to the “without Project” scenarios for both construction and operational stages, it is found that the ALARP is due to the background population instead of the population induced by the Project.

4.7 Ecological Impact (Terrestrial and Marine)

- 4.7.1 The Ecological Impact Assessment is conducted in accordance with the relevant requirements as specified in Section 3.4.6 and Appendix H of the EIA study brief, as well as Annexes 8 and 16 of the EIAO-TM.
- 4.7.2 Literature review and ecological field surveys have been conducted. Terrestrial habitats identified within the assessment area include woodland, fung shui wood, plantation, shrubland, cultivated land, developed area, and stream. (Refer to [Figure No. 60334056/ES/4.05](#) and [Figure No. 60334056/ES/4.06](#)) Marine habitats within the assessment area include subtidal hard substrata, soft bottom habitats, and intertidal habitats. The ecological values of the identified habitats are rated between low and moderate to high. No sites of conservation importance will be directly affected.
- 4.7.3 Direct impacts arising from the proposed land-based works include permanent loss and temporary loss of some woodland, plantation, and shrubland, as well as minor habitat fragmentation of woodland and plantation in Nui Po Shan. Given the relatively low to moderate ecological values of the habitats and the small area affected, impacts are anticipated to be generally minor in nature. The permanent loss of woodland (0.65 ha) will be mitigated by compensatory planting (approximately 0.92 ha) of native species, while all temporarily affected works area will be reinstated. A Woodland Compensation Plan should be prepared to form the basis (e.g. implementation details, management requirement, and monitoring requirements) and submitted for approval from EPD at least three months before commencement of compensatory woodland planting. All temporarily affected works area will be reinstated. Avoidance measures would be implemented to preserve a natural stream in vicinity of the proposed access road on Nui Po Shan (e.g. provision of an elevated section at the stream crossing).
- 4.7.4 Some plant species of conservation importance were recorded within the Project boundary. To minimise impacts, a Detailed Vegetation Survey should be conducted prior to the commencement of construction works to identify potentially affected plant species. All identified species would be labelled and fenced off on site for better preservation or, in case of unavoidable loss, for transplantation according to the Protection and Transplantation Proposal.
- 4.7.5 There would be no disturbance to marine or riverbed sediments under the Project and hence loss of marine habitat is avoided. According to the water quality impact assessment, no unacceptable ecological impact is anticipated on marine ecological resources. Nevertheless, an event and action plan and a water quality monitoring programme should be implemented during construction and operation phases to verify whether or not impact predictions are representative, and to ensure that it would not result in unacceptable impacts. During operation phase, monitoring of the treated effluent quality from the CSTW

should be carried out to ensure that the effluent quality would comply with the design standards.

- 4.7.6 Construction site runoff and other disturbance impacts resulting from the proposed aboveground works may potentially result in indirect impact on the streams, wildlife, and some fauna species of conservation importance. Standard mitigation measures such as good site practice, control of glare / lighting, minimisation of groundwater infiltration, and water quality impact control measures are proposed.
- 4.7.7 Excavation in rock would have relatively minor potential impacts on groundwater as compared to excavation in soft ground. The rock itself is a natural barrier with very low permeability which can prevent potential groundwater drawdown in any soil and aquifer layers above the rock stratum. Thus it would not adversely affect the groundwater level within the soil layer as well as the water level of the adjacent streams. Since the majority of the CSTW is situated in very competent rock stratum in Nui Po Shan, the impact on groundwater would be minor. Nonetheless, precautionary measures would be taken in cavern design and construction to minimize the potential impacts from the change in groundwater level. Preventive measures such as pre-grouting and post-grouting, which have been successfully applied in other tunnel projects in Hong Kong, would be conducted to minimize any impact from the cavern construction activities to the adjacent groundwater table. Surface water level or groundwater level near the caverns will be closely monitored during the construction stage to ensure that the surrounding groundwater level will not be adversely affected due to the cavern construction activities and presence of the caverns. Post-construction monitoring of groundwater for 1 year will also be carried out after completion of excavation works.
- 4.7.8 With the proper implementation of mitigation measures, no adverse residual ecological impacts are expected from the Project. The implementation of mitigation measures would be subject to regular audit as part of the EM&A programme.

4.8 Fisheries Impact

- 4.8.1 Potential impacts on fisheries have been assessed in accordance with Section 3.4.7 and Appendix I of the EIA study brief as well as Annex 9 and Annex 17 of the EIAO-TM.
- 4.8.2 No important spawning or nursery grounds were identified in the immediate vicinity of the existing STSTW, while the nearest important nursery area for commercial fisheries resources is located in Three Fathoms Cove in Tolo Channel (approximately 6.5 km from the existing STSTW). The nearest FCZs (Yim Tin Tsai FCZ and Yim Tin Tsai (East) FCZ) are located approximately 4.5 km away from the existing STSTW. The importance of capture fisheries resources in the vicinity of the existing STSTW was identified as low in terms of both production weight and value. Fish fry production was low in the immediate vicinity of the existing STSTW in Tolo Harbour.
- 4.8.3 The Project will only involve land-based construction works. There will be no disturbance to marine or riverbed sediments. Under the Project design, any Project effluent bypass to the Tolo Harbour will be discharged separately through the existing emergency outfalls of the TPSTW and STSTW. Construction of the connection pipes to existing emergency outfall of STSTW was proposed to be by trenchless method underneath Shing Mun River. This construction method would not cause disturbance to the marine sediment and hence no impact to or loss of fishing ground is anticipated.
- 4.8.4 During the construction phase, THEES connection works required for this Project will be arranged to be synchronized with the THEES maintenance, such that no additional water quality impact, and hence fisheries impact from changes of water quality, will be induced by the proposed THEES connection works.
- 4.8.5 Despite not being specifically induced by this Project, the scenario of THEES maintenance or bypass under extreme emergency situations during the operation phase of the Project

as mentioned in [Sections 4.4.6](#) and [4.4.10](#) have been considered. Indirect fisheries impacts due to deterioration of water quality are expected during these abnormal operation periods. Changes in water quality (e.g. SS, dissolved oxygen (DO), total inorganic nitrogen (TIN), chlorophyll-a) at Yim Tin Tsai FCZ, Yim Tin Tsai (East) FCZ, potential subzone of Yim Tin Tsai FCZ, Yung Shue Au FCZ, Lo Fu Wat FCZ and the nursery area for commercial fisheries resources at Three Fathoms Cove are expected during these scenarios. However, no significant changes in water quality parameters are predicted as the pollution elevation associated with the discharge would be reversible and hence no unacceptable water quality impacts are expected. With the implementation of mitigation measures for water quality, no unacceptable fisheries impacts are expected.

4.9 Landscape and Visual Impacts

- 4.9.1 A landscape and visual impact assessment has been carried out in accordance with Section 3.4.8 and Appendix J of the EIA study brief, and Annexes 10 and 18 of the EIAO-TM.
- 4.9.2 The Project will inevitably result in changes to the existing landscape in the vicinity of the portal areas, the ventilation shaft outlet and the access road leading to it, during construction and operation phases. Associated landscape and visual impacts have been minimized through careful consideration of alternatives, minimization of works areas, incorporation of aesthetic external designs and landscape treatments of proposed aboveground structures.
- 4.9.3 The Project is generally located within Green Belt (GB) Zones of the Approved Sha Tin Outline Zoning Plan (OZP) No. S/ST/32 (11.12.2015) and, for a small part, on the Approved Ma On Shan OZP No. S/MOS/22 (15.1.2016). It is recommended that both the Sha Tin OZP and Ma On Shan OZP shall be amended to incorporate the latest changes arising from the Project.
- 4.9.4 Based on a broad brush estimate, approximately 828 existing trees in the three landscape resources (i.e. Amenity Planting Area in the existing STSTW, Roadside Planting Areas along Ma On Shan Road and Woodland on Slopes of Nui Po Shan) will be affected by the proposed works. The affected trees shall be considered for transplanting in accordance with Development Bureau Technical Circular (Works) No. 7/2015 - Tree Preservation and the latest Guidelines on Tree Preservation. Many of the affected trees are of semi-mature to mature size. None of these are Registered Old and Valuable Trees (OVTs). Under the proposed scheme for the Project, opportunities for tree compensation within the Project boundary has been fully explored and incorporated in the proposed mitigation measures as much as practicable. Approximately 330 nos. of heavy standard trees and 10,000 nos. of tree whips can be compensated for the loss of existing trees due to the Project. Tree Preservation and Removal Proposals including compensation planting scheme shall be submitted in accordance with the above mentioned technical circular.
- 4.9.5 Under the Project, there would be temporary loss of 59,900m² of existing vegetation on Slopes of Nui Po Shan. With the proposed compensation and reinstatement woodland mix planting proposals (approximately 34,700 m²), there would be a net permanent loss of 25,200m² of vegetation in Woodland on Slopes of Nui Po Shan.
- 4.9.6 With the implementation of proposed mitigation measures, it is predicted that there would be substantial to slight residual impact on the above listed landscape resources in Section 4.9.4 during construction, and moderate to insubstantial impact on day 1 of operation. The residual impact on these landscape resources would be further reduced to slight to insubstantial when the proposed compensatory planting, buffer planting and woodland mix planting become mature in year 10 of operation.
- 4.9.7 It is predicted that there would be substantial to slight residual impact on four landscape character areas (i.e. Sha Tin Waterfront Industrial Landscape Character Area (LCA), Ma On Shan Transportation Corridor LCA, A Kung Kok and Tai Shui Hang Miscellaneous

Urban Fringe LCA and A Kung Kok Settled Valley LCA) during construction, and moderate to insubstantial impact on day 1 of operation. The residual impact on these landscape character areas would be further reduced to slight to insubstantial when the proposed compensatory planting, buffer planting and woodland mix planting become mature in year 10 of operation.

- 4.9.8 Regarding visual impact, it is predicted that there would be moderate residual impact on residential Visually Sensitive Receivers (VSRs) in Chevalier Garden (R-01) and Kam Tai Court (R-12) (locations of VSRs refer to [Figure No. 60334056/ES/4.07](#)). The residual impact on these VSRs would remain moderate on day 1 of operation and would be reduced to slight when the proposed tree planting becomes mature in year 10 of operation. (Photomontages refer to [Figure No. 60334056/ES/4.08](#) and [Figure No. 60334056/ES/4.09](#).) There would be slight to insubstantial residual impact on other VSRs within the visual envelope during the construction and operation of the Project.
- 4.9.9 As a whole, the residual landscape and visual impacts of the proposed Project is considered acceptable with the proposed mitigation measures implemented during construction and operation phases.

4.10 Cultural Heritage Impact

- 4.10.1 The Cultural Heritage Impact Assessment is conducted in accordance with the criteria and guidelines as stated in the requirements given in Section 3.4.9 and Appendix K of the EIA Study Brief, as well as Annexes 10 and 19 of the EIAO-TM. The assessment area includes areas within a distance of 50m from the site boundary of the Project.
- 4.10.2 It has assessed current condition and potential impact on cultural heritage resources within the study area. As no terrestrial and marine archaeological potential is identified, it is considered that there is no impact on archaeology and mitigation measures are not required.
- 4.10.3 Two built heritage resources in Tai Shui Hang (both are Grade 3 historic buildings) as well as the Pak Kong-Mui Tsz Lam Trackway (Site of Archaeological Interest) are identified outside the 50m study area from the site boundary of the Project. Thus, no potential direct or indirect impact to these cultural heritage resources is anticipated, and therefore no mitigation measures are required.

4.11 Waste Management Implications

- 4.11.1 The wastes impact assessment is conducted in accordance with the criteria and guidelines as stated in the requirements given in Section 3.4.4 and Appendix E of the EIA Study Brief, as well as Annex 7 and Annex 15 of the EIAO-TM.

Construction Phase

- 4.11.2 Construction and Demolition (C&D) materials will be generated from excavation of rock caverns (at the CSTW site and the potential explosive magazine site), tunnels, adits, ventilation/shafts buildings, site formation works and the demolition of the existing STSTW. These C&D materials comprise both inert and non-inert components, such as soil, Artificial Hard Materials (AHM), rocks, wood and metals. Based on the latest layout, the volume of surplus C&D materials is estimated to be approximately 6,000,000 m³ of inert material and 124,000 m³ of non-inert material (i.e. C&D waste). About 3,740,000 m³ of total excavated materials is rock, which would be generated from the cavern constructions. An estimated volume of 595,000 m³ is soft materials while 1,669,000 m³ would be AHM (i.e. concrete).
- 4.11.3 Soft inert C&D materials from the above construction works will be sorted and reused as filling material as much as possible. The surplus will be transported to Tuen Mun Area 38 Fill Bank for reuse by other projects. Hard inert C&D material includes Grade III granitic rock and Grade I & II granitic rock. The Grade III granitic rock and AHM will be re-used on

site as much as possible and the surplus will be transported to Tuen Mun Area 38 Fill Bank for reuse by other projects. The Grade I & II rock will be transported to Lam Tei Quarry for recycling as useful aggregates for construction use by other projects. Non-inert waste will be recycled as far as possible before disposed to landfill. Opportunities in minimisation of generation and maximisation of reuse would be continually investigated during the detailed design and construction phases. With the implementation of the recommended good site practices and mitigation measures for the handling, transportation and disposal of the identified waste arising, adverse environmental impacts is not anticipated.

- 4.11.4 Other waste materials, including general refuse and chemical waste, will also be generated throughout construction. Provided that these identified wastes will be handled, transported and disposed of using the recommended methods and that good site practices would be followed, adverse environmental impacts are not expected.

Operational Phase

- 4.11.5 The main waste types to be generated during the operation phase would be grit and screenings, and sewage sludge. The collection, transportation and disposal practices of the grit and screenings would follow the existing arrangements currently in operation at the existing STSTW. The dewatered sludge would be disposed of to the proposed Sludge Treatment Facilities. Provided proper handling procedures and disposal method are adopted, adverse environmental impacts are not expected during the operation phase.

4.12 Health Impact

- 4.12.1 Potential health impact in relation to Toxic Air Pollutants (TAPs) emissions associated with activities during the operation of the CSTW have been assessed in accordance with the requirements given in Section 3.4.10 of EIA Study Brief.
- 4.12.2 Literature review was conducted to identify the sewage treatment related TAPs of potential concern for further assessment, and determine the acceptable toxicity values for non-carcinogenic and carcinogenic risks assessment.
- 4.12.3 The risk arising from exposure to TAPs associated with the emissions of the relocated STSTW is evaluated. The non-carcinogenic and carcinogenic health impact of the TAPs imposed to the impacted human receptors (HRs) were assessed and compared with international guideline levels. The assessment findings revealed that the levels of TAPs at HRs would be extremely small when compared to the derived reference levels. The highest incremental cancer risk arising from the operation of CSTW is predicted to be 7.1 E-08 which is far below the guidance level of 1E-06 adopted by United States Environmental Protection Agency (USEPA) and it is considered that the Project would not present an unacceptable risk and no further analysis is necessary. For the criteria of air pollutants, while it is not possible to rule out the additional potential health effects from the operation of CSTW with complete certainty, the impact on health from extremely small additional air pollutants is likely to be very small and unlikely to be quantifiable.
- 4.12.4 A minor portion of treated effluent would be reused but would be limited to non-potable uses inside the plant and therefore the general public is not expected to be exposed to the treated effluent. Thus, there is no health risk to the general public caused from the reuse of treated effluent.

5 ENVIRONMENTAL MONITORING AND AUDIT (EM&A)

- 5.1.1 An EM&A programme has been prepared for air quality, noise, water quality, land contamination, ecology (terrestrial and marine), fisheries, landscape and visual, and waste management during construction phase. A summary of the EM&A requirements by each of the environmental parameters is presented in [Table 5.1](#) below.

Table 5.1 Summary of EM&A Requirements

	Prior to Construction	Construction Phase	Operational Phase
Air Quality Impact	✓	✓	✓
Noise Impact	✓	✓	✓
Water Quality Impact	✓	✓	✓
Land Contamination	x	✓	x
Hazard to Life	x	✓	x
Ecology (Terrestrial and Marine) Impact	✓	✓	x
Fisheries	x	x	x
Landscape and Visual Impacts	✓	✓	x
Cultural Heritage	x	x	x
Waste Management Implication	x	✓	x
Health Impact	x	x	x

Air Quality Impact

- 5.1.2 EM&A for potential dust impacts would be conducted during the construction phase of the Project so as to check compliance with legislative requirements. Baseline and impact monitoring of 1-hour average TSP at representative locations are recommended.
- 5.1.3 No adverse impact would be generated during the operational phase of this Project. However, odour monitoring is proposed to be conducted at the deodorizing units in the first three years upon commissioning of CSTW to determine whether the deodorizing units can meet the odour removal performance requirement. An Odour Complaint Registration System is also proposed in the EM&A programme to ascertain whether the ASRs experience odour nuisance as a result of emissions from CSTW.

Noise Impact

- 5.1.4 An EM&A programme has been proposed to be established according to the expected occurrence of noisy activities during construction phase. All the recommended mitigation measures for daytime normal working activities would be incorporated into the EM&A programme for implementation during construction.
- 5.1.5 No adverse impact would be generated during the operational phase of this Project. Prior to the operational phase of the Project, a commissioning test for the ventilation buildings, the ventilation shaft, ventilation fan for chiller plant room at administration building and cooling tower at the administration building would be conducted to ensure compliance with the relevant allowable maximum sound power levels.

Water Quality Impact

- 5.1.6 A baseline monitoring programme at Tolo Harbour is proposed prior to the commencement of the Project construction works to establish the baseline water quality conditions. An

event and action plan and a water quality monitoring programme for the THEES maintenance events are proposed during the construction phase of the Project. Regular site inspections during the construction phase is also recommended to be undertaken to inspect the construction activities and works areas in order to ensure the recommended mitigation measures are properly implemented.

- 5.1.7 A water quality monitoring programme at KTN is proposed after commissioning of this Project to verify if there is any adverse water quality impact from the Project. An event and action plan and water quality monitoring programme for the THEES maintenance or emergency discharge events are also proposed for the operational phase of the Project.

Land Contamination

- 5.1.8 Remediation works, if necessary, would be carried out during construction phase but prior to commencement of any construction works. All the mitigation measures as recommended in the EIA Study, EM&A Manual and future RAP(s) would be implemented during the remediation works. Regular site inspection during the construction phase have been proposed to ensure the recommended mitigation measures are properly implemented.
- 5.1.9 As any contaminated soil / groundwater would be identified and properly treated prior to re-development, land contamination during the operational phase is not expected. As such, EM&A during operational phase is considered not necessary.

Hazard to Life

- 5.1.10 Blasting activities regarding storage, transport and use of explosives should be supervised and audited by competent site staff to ensure strict compliance with the blasting permit conditions.

Ecological Impact (Terrestrial and Marine)

- 5.1.11 Implementation of the recommended mitigation measures during construction phase would be regularly audited.
- 5.1.12 No adverse ecological impact during operational phase is anticipated as the level of disturbance would be comparable to the existing condition. EM&A during operational phase is considered not necessary.

Fisheries Impact

- 5.1.13 No unacceptable residual fisheries impact is expected from the Project. No monitoring program specific for fisheries is required. However, an event and action plan and a water quality monitoring programme is proposed for the THEES maintenance events during the construction and operational phases of the Project. Regular site inspections during the construction phase is also recommended to be undertaken to inspect the construction activities and works areas in order to ensure the recommended mitigation measures are properly implemented.

Landscape and Visual Impacts

- 5.1.14 The EM&A for the implementation of recommended mitigation measures during construction phase would be regularly conducted.
- 5.1.15 No significant adverse impact during operational phase is anticipated after implementation of the mitigation measures. Therefore, the EM&A works related to landscape and visual impacts for the operational phase are considered not necessary.

Cultural Heritage

- 5.1.16 No cultural heritage resources are located within the 50m study area from the site boundary of the Project and no direct or indirect impact to these cultural heritage resources is anticipated. On this basis, EM&A programme is considered not necessary.

Waste Management Implications

- 5.1.17 There are stringent regulations, legislations requirements and contract requirements on the handling, storage, and disposal of construction waste. Regular site inspections during the construction phase is proposed to be undertaken to inspect the construction activities and works areas in order to ensure the recommended mitigation measures are properly implemented.
- 5.1.18 Adverse environmental impacts generated from handling, storage and disposal of waste are not expected from the operation of the Project with the implementation of good waste management practices. Therefore, waste monitoring and audit programme for the operation phase of the Project would not be required.

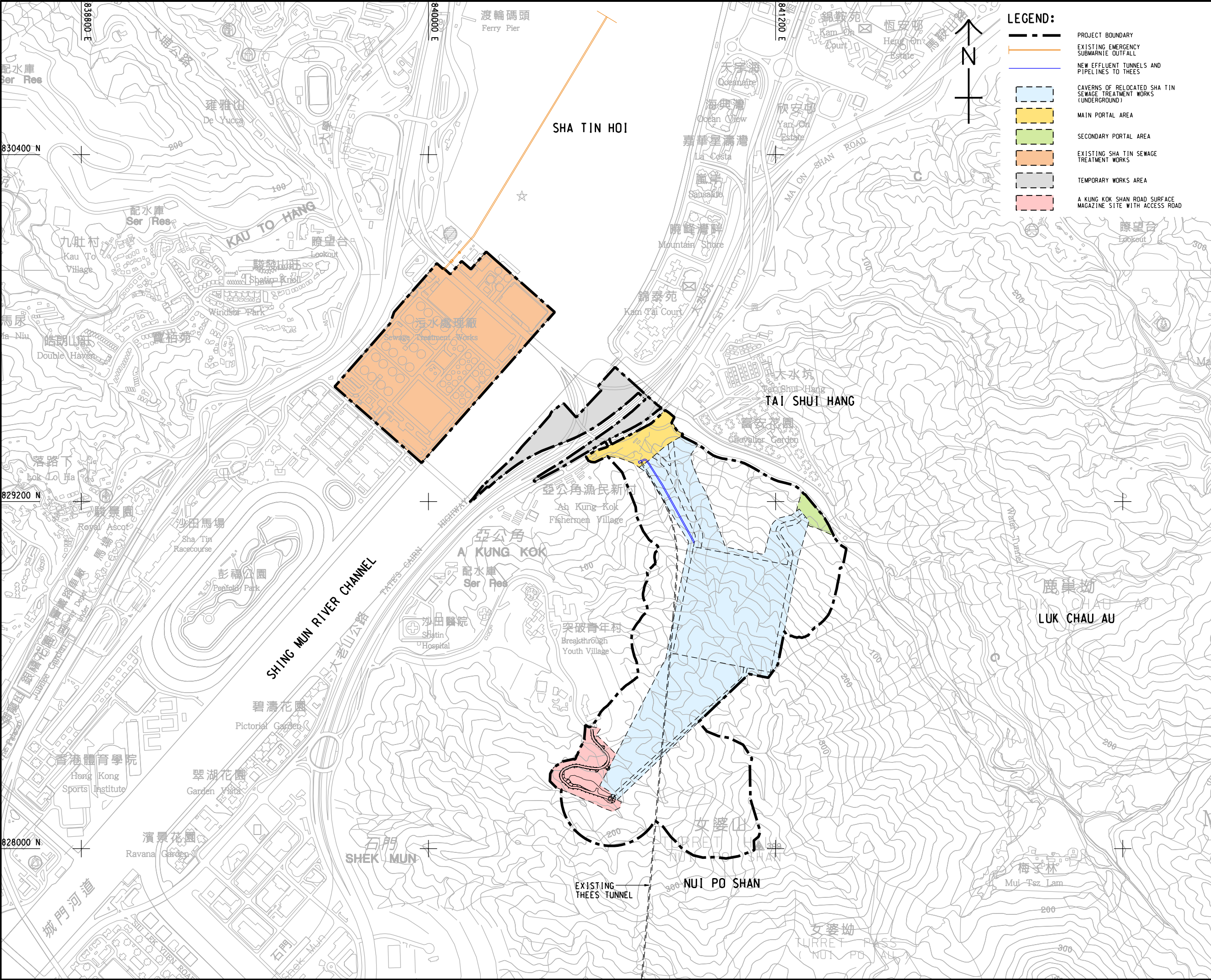
Health Impact

- 5.1.19 Since no adverse health impact is expected from the Project, EM&A programme for health impact is not required.

6 CONCLUSION

- 6.1.1 The EIA provides information on the nature and extent of the environmental impacts likely to arise from the construction and operation of the CSTW and decommissioning of existing STSTW. The EIA has, where appropriate, identified mitigation measures to ensure compliance with environmental legislations and standards.
- 6.1.2 Overall, the EIA concluded that the Project would comply with the requirements of the EIAO and EIAO-TM with the implementation of the proposed mitigation measures during the construction and operational phases of the CSTW and decommissioning of existing STSTW. The schedule of implementation of the proposed mitigation measures has been provided in the EIA Report. An EM&A programme has also been recommended to check the effectiveness of the proposed mitigation measures.

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AECOM

PROJECT

RELOCATION OF SHA TIN
SEWAGE TREATMENT
WORKS TO CAVERNS:
CAVERNS AND SEWAGE
TREATMENT WORKS -
INVESTIGATION, DESIGN
AND CONSTRUCTION

CLIENT

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Drainage Services Department

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NO.	DATE	DESCRIPTION	CHK.

STATUS

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比例

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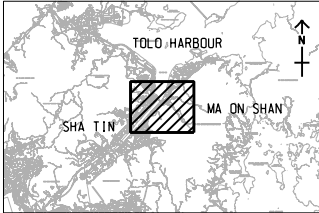
DIMENSION UNIT

尺寸單位

METRES

KEY PLAN

索引圖



PROJECT NO.

項目編號

60334056

CONTRACT NO.

合約編號

CE 30/2014 (DS)

SHEET TITLE

圖紙名稱

PROJECT LAYOUT PLAN

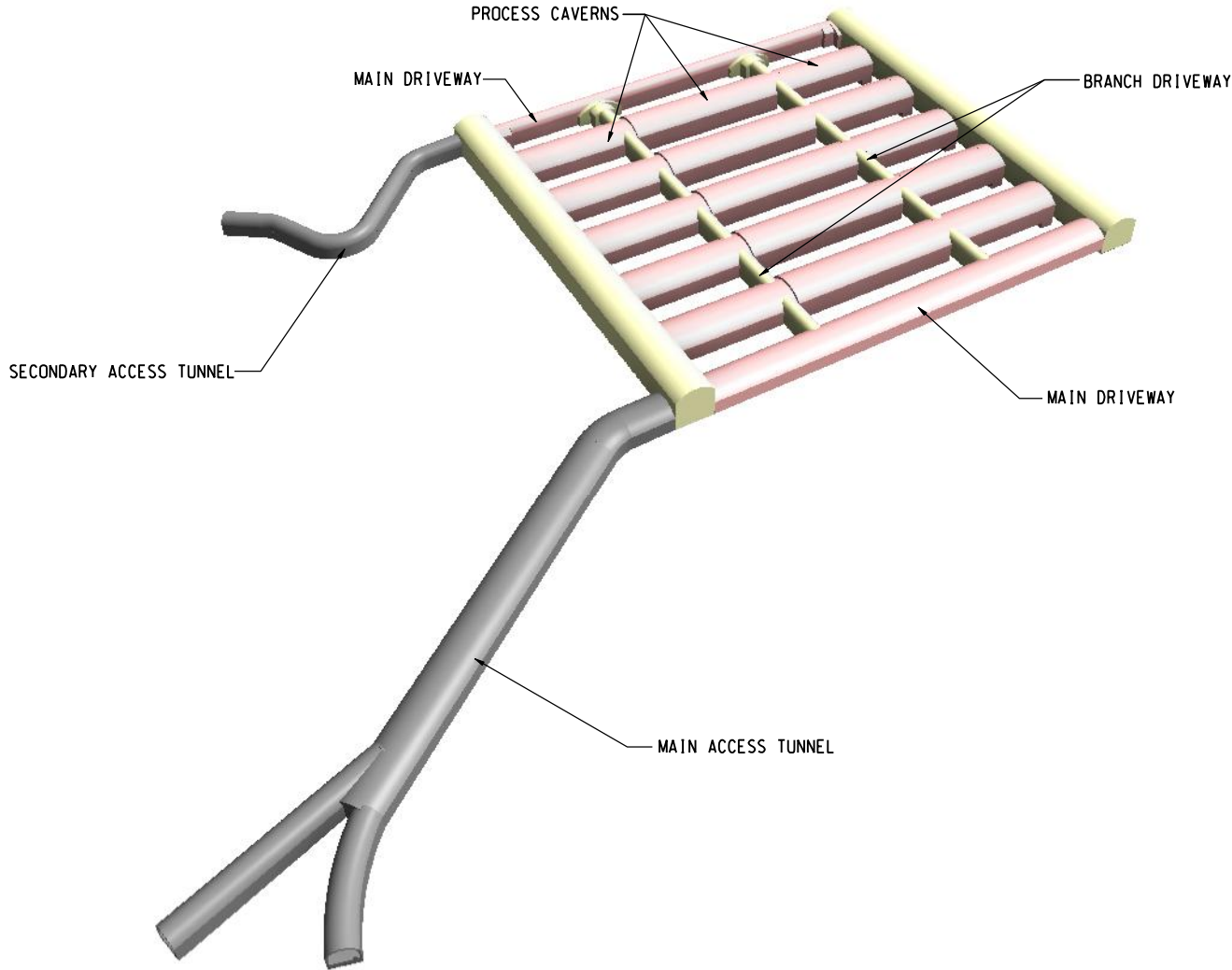
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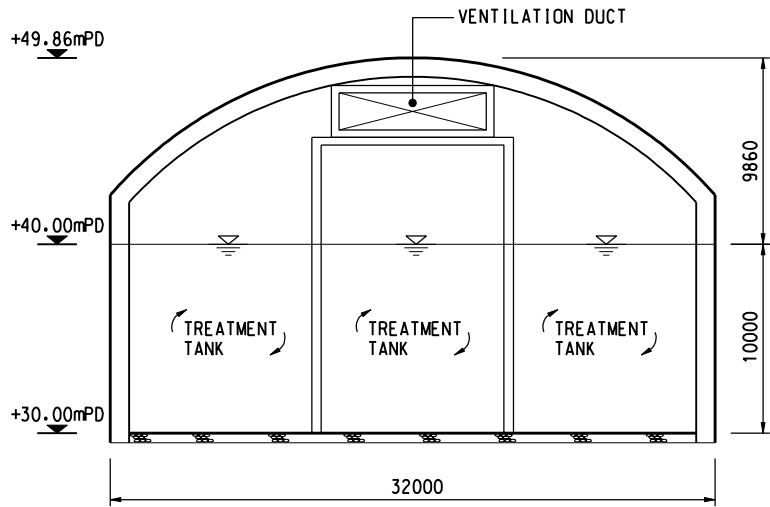
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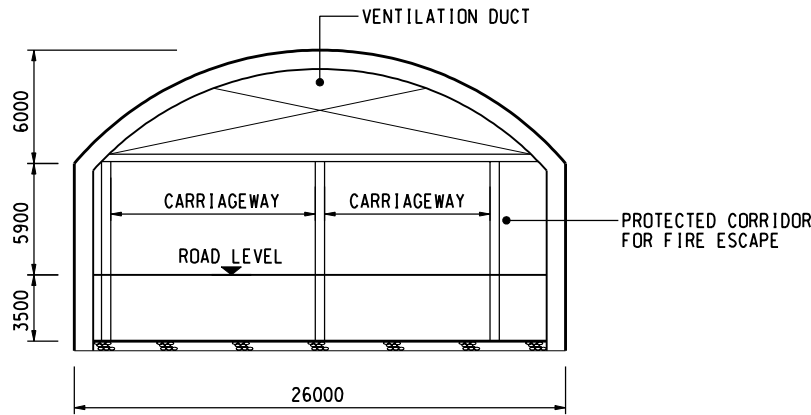
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3-D VIEW OF CSTW FOR ILLUSTRATION
N.T.S.



TYPICAL SECTION AT
PROCESS CAVERN
SCALE 1 : 400



TYPICAL SECTION AT TUNNEL
SCALE 1 : 400

NOTE:
1. ELEVATIONS AND DIMENSIONS VARIES AT DIFFERENT LOCATION
OF CAVERNS AND ARE SUBJECT TO DETAILED DESIGN.

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RELOCATION OF SHA TIN
SEWAGE TREATMENT
WORKS TO CAVERNS:
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I/R	DATE	DESCRIPTION	CHK.

STATUS

SCALE

比例	DIMENSION UNIT
A3 AS SHOWN	MILLIMETRES

KEY PLAN

索引圖

PROJECT NO.

項目編號	合約編號
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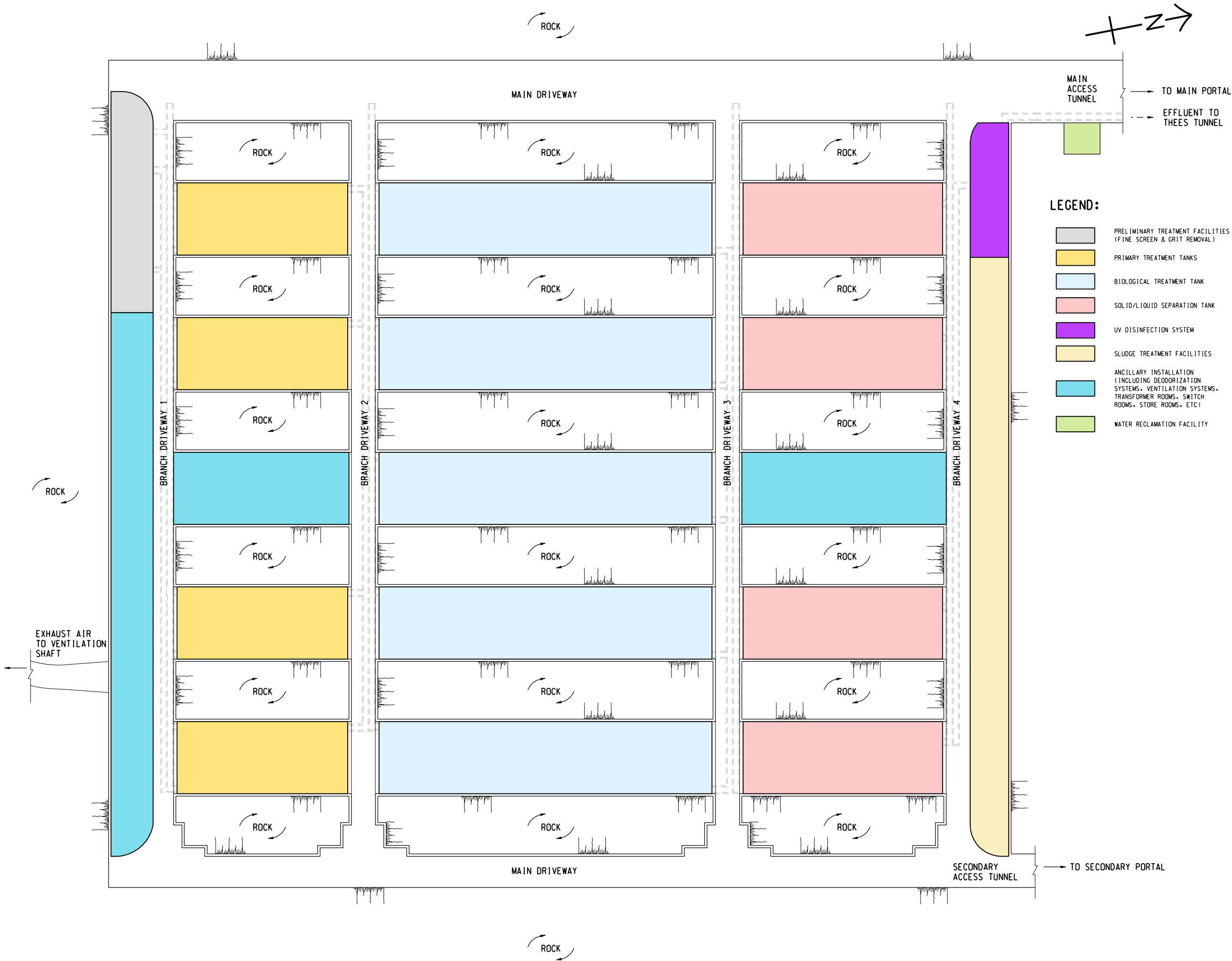
SHEET TITLE

3-D VIEW AND TYPICAL
SECTIONS OF CSTW

SHEET NUMBER

圖紙編號
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階段

SCALE
比例

N.T.S.

DIMENSION UNIT
尺寸單位

MILLIMETRES

KEY PLAN
索引圖

PROJECT NO.
項目編號

60334056

CONTRACT NO.
合約編號

CE 30/2014 (DS)

SHEET TITLE
圖紙名稱

LAYOUT PLAN OF THE PROPOSED
SEWAGE TREATMENT WORKS
IN CAVERNS

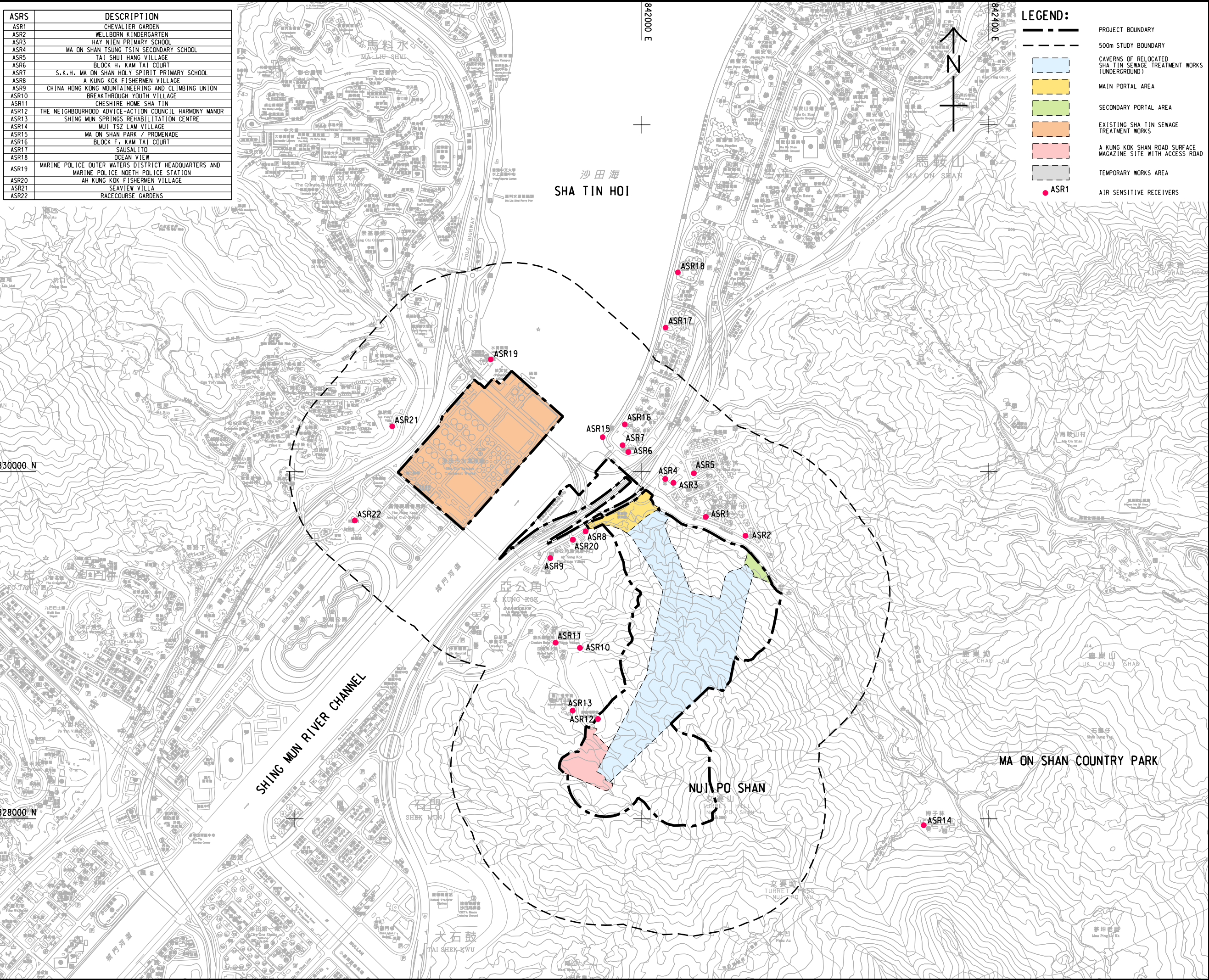
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ASRS	DESCRIPTION
ASR1	CHEVALIER GARDEN
ASR2	WELLBORN KINDERGARTEN
ASR3	HAY NIEH PRIMARY SCHOOL
ASR4	MA ON SHAN TSUNG TSIN SECONDARY SCHOOL
ASR5	TAI SHUI HANG VILLAGE
ASR6	BLOCK H, KAM TAI COURT
ASR7	S.K.H. MA ON SHAN HOLY SPIRIT PRIMARY SCHOOL
ASR8	A KUNG KOK FISHERMEN VILLAGE
ASR9	CHINA HONG KONG MOUNTAINEERING AND CLIMBING UNION
ASR10	BREAKTHROUGH YOUTH VILLAGE
ASR11	CHESHIRE HOME SHA TIN
ASR12	THE NEIGHBOURHOOD ADVICE-ACTION COUNCIL HARMONY MANOR
ASR13	SHING MUN SPRINGS REHABILITATION CENTRE
ASR14	MUI TSZ LAM VILLAGE
ASR15	MA ON SHAN PARK / PROMENADE
ASR16	BLOCK F, KAM TAI COURT
ASR17	SAUSALITO
ASR18	OCEAN VIEW
ASR19	MARINE POLICE OUTER WATERS DISTRICT HEADQUARTERS AND MARINE POLICE NORTH POLICE STATION
ASR20	AH KUNG KOK FISHERMEN VILLAGE
ASR21	SEAVIEW VILLA
ASR22	RACECOURSE GARDENS



LEGEND:	
	PROJECT BOUNDARY
	500m STUDY BOUNDARY
	CAVERNS OF RELOCATED SHA TIN SEWAGE TREATMENT WORKS (UNDERGROUND)
	MAIN PORTAL AREA
	SECONDARY PORTAL AREA
	EXISTING SHA TIN SEWAGE TREATMENT WORKS
	A KUNG KOK SHAN ROAD SURFACE MAGAZINE SITE WITH ACCESS ROAD
	TEMPORARY WORKS AREA
	AIR SENSITIVE RECEIVERS

AECOM
PROJECT
RELOCATION OF SHA TIN SEWAGE TREATMENT WORKS TO CAVERNS: CAVERNS AND SEWAGE TREATMENT WORKS - INVESTIGATION, DESIGN AND CONSTRUCTION
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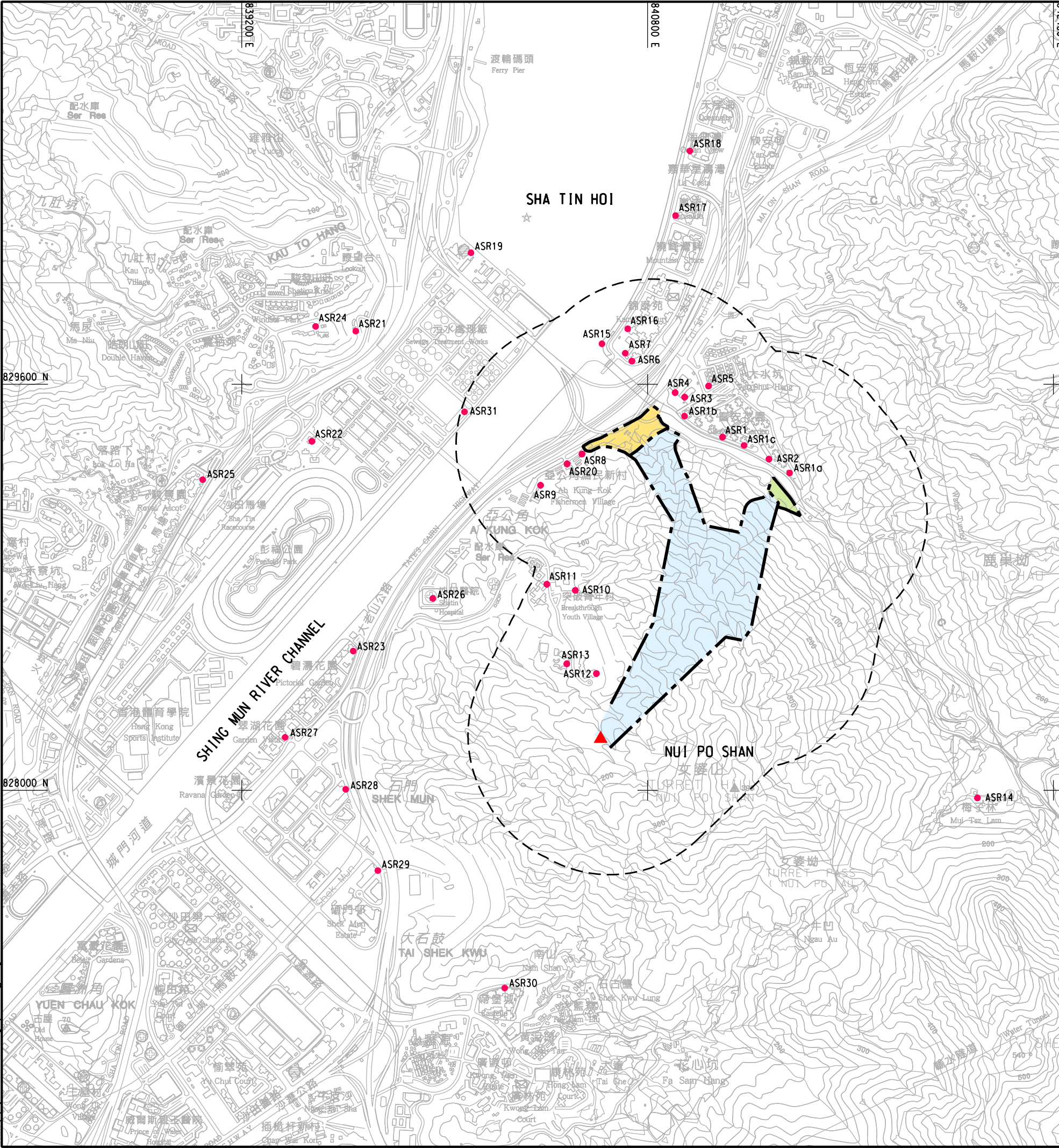
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SCALE
比例
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KEY PLAN
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DIMENSION UNIT
尺寸單位
METRES

PROJECT NO.
項目編號
60334056
CONTRACT NO.
合約編號
CE 30/2014 (DS)
SHEET TITLE
圖紙名稱
REPRESENTATIVE AIR SENSITIVE RECEIVERS FOR CONSTRUCTION DUST IMPACT
SHEET NUMBER
圖紙編號
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LEGEND:

- PROJECT BOUNDARY
- 500m STUDY BOUNDARY
- CAVERNS OF RELOCATED SHA TIN SEWAGE TREATMENT WORKS (UNDERGROUND)
- MAIN PORTAL AREA
- SECONDARY PORTAL AREA
- AIR SENSITIVE RECEIVER
- PROPOSED VENTILATION SHAFT LOCATION (ELEVATION 177mPD, 840614.7E, 828202.7N)

SHA TUN HOI

SHING MUN RIVER CHANNEL

MA ON SHAN COUNTRY PARK

NUI PO SHAN

YUEN CHAU KOK

TAI SHEK KWU

SHING MUN SPRINGS REHABILITATION CENTRE

MA ON SHAN TSUNG TSIN SECONDARY SCHOOL

TAI SHUI HANG VILLAGE

BLOCK H, KAM TAI COURT

S.K.H. MA ON SHAN HOLY SPIRIT PRIMARY SCHOOL

A KUNG KOK FISHERMEN VILLAGE

CHINA HONG KONG MOUNTAINEERING AND CLIMBING UNION

BREAKTHROUGH YOUTH VILLAGE

CHESHIRE HOME SHA TIN

THE NEIGHBOURHOOD ADVICE-ACTION COUNCIL HARMONY MANOR

SHING MUN SPRINGS REHABILITATION CENTRE

MUI TSZ LAM VILLAGE

MA ON SHAN PARK / PROMENADE

BLOCK F, KAM TAI COURT

SAUSALITO

OCEAN VIEW

MARINE HEADQUARTERS

AH KUNG KOK FISHERMEN VILLAGE

SEAVIEW VILLA

RACECOURSE GARDENS

PICTORIA GARDEN

KAM ON GARDEN

ROYAL ASCOT

SHA TIN HOSPITAL

GARDEN VISTA

TOPSAIL PLAZA

HONGKONG BAPTIST UNIVERSITY AFFILIATED SCHOOL WONG KAM FAI SECONDARY SCHOOL

THE CASTELLO

PLANNED ASR

ASRS	DESCRIPTION
ASR1	CHEVALIER GARDEN
ASR1A	CHEVALIER GARDEN (BLOCK 17)
ASR1B	CHEVALIER GARDEN (BLOCK 6)
ASR1C	CHEVALIER GARDEN (BLOCK 1)
ASR2	WELLBORN KINDERGARTEN
ASR3	HAY NIEN PRIMARY SCHOOL
ASR4	MA ON SHAN TSUNG TSIN SECONDARY SCHOOL
ASR5	TAI SHUI HANG VILLAGE
ASR6	BLOCK H, KAM TAI COURT
ASR7	S.K.H. MA ON SHAN HOLY SPIRIT PRIMARY SCHOOL
ASR8	A KUNG KOK FISHERMEN VILLAGE
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ASR10	BREAKTHROUGH YOUTH VILLAGE
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ASR13	SHING MUN SPRINGS REHABILITATION CENTRE
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ASR15	MA ON SHAN PARK / PROMENADE
ASR16	BLOCK F, KAM TAI COURT
ASR17	SAUSALITO
ASR18	OCEAN VIEW
ASR19	MARINE HEADQUARTERS
ASR20	AH KUNG KOK FISHERMEN VILLAGE
ASR21	SEAVIEW VILLA
ASR22	RACECOURSE GARDENS
ASR23	PICTORIA GARDEN
ASR24	KAM ON GARDEN
ASR25	ROYAL ASCOT
ASR26	SHA TIN HOSPITAL
ASR27	GARDEN VISTA
ASR28	TOPSAIL PLAZA
ASR29	HONGKONG BAPTIST UNIVERSITY AFFILIATED SCHOOL WONG KAM FAI SECONDARY SCHOOL
ASR30	THE CASTELLO
ASR31	PLANNED ASR

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PROJECT

RELOCATION OF SHA TIN SEWAGE TREATMENT WORKS TO CAVERNS: CAVERNS AND SEWAGE TREATMENT WORKS - INVESTIGATION, DESIGN AND CONSTRUCTION

CLIENT

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Drainage Services Department

CONSULTANT

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ISSUE/REVISION

NO.	DATE	DESCRIPTION	CHK.

STATUS

SCALE

比例

DIMENSION UNIT

尺寸單位

A3 1: 16000

METRES

KEY PLAN

A3 1: 50000

索引圖

PROJECT NO.

項目編號

60334056

CONTRACT NO.

合約編號

CE 30/2014 (DS)

SHEET TITLE

圖紙名稱

REPRESENTATIVE AIR SENSITIVE RECEIVERS FOR OPERATIONAL ODOUR IMPACT

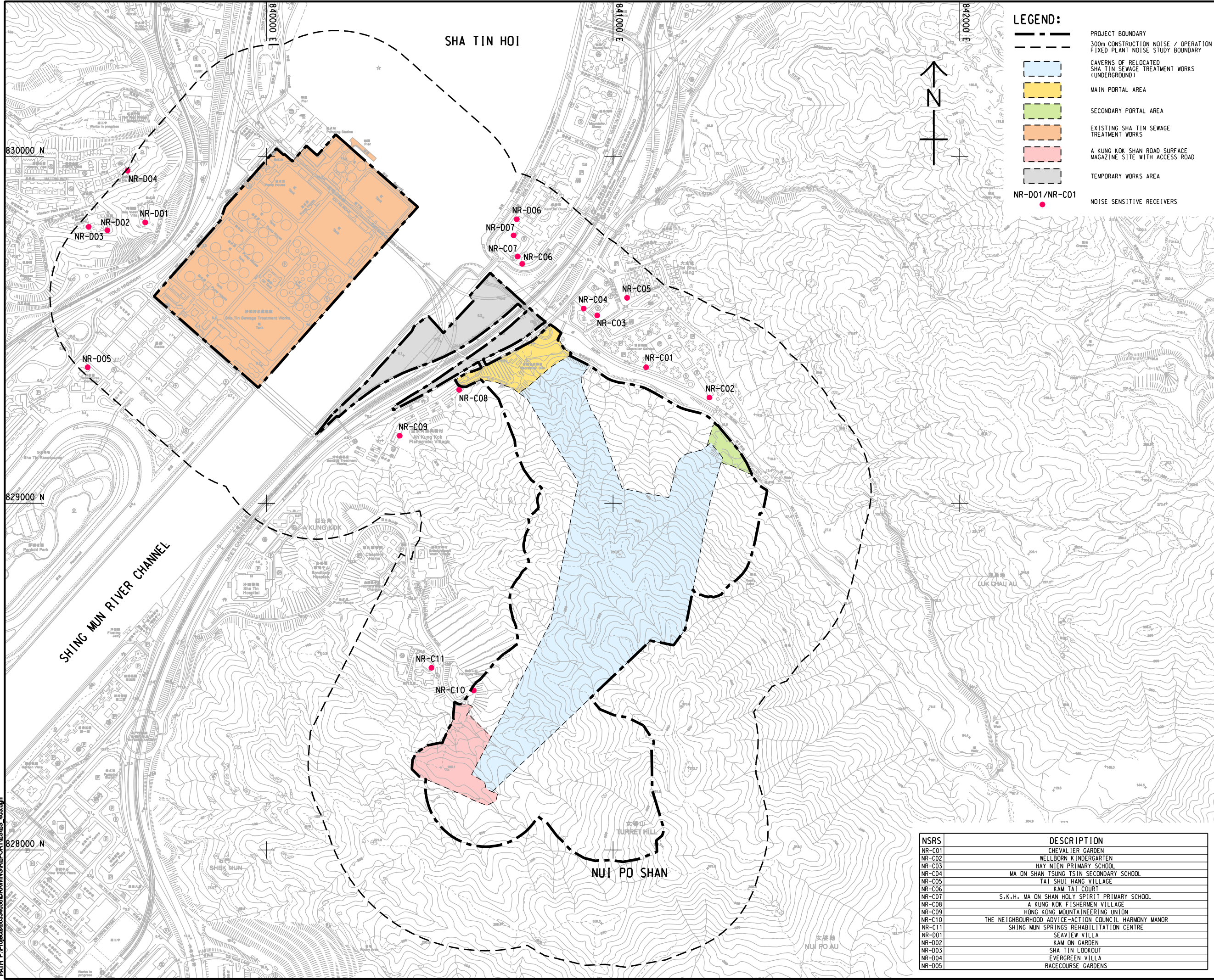
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圖紙編號

60334056/ES/4.02

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LEGEND:

- PROJECT BOUNDARY
- 300m CONSTRUCTION NOISE / OPERATION FIXED PLANT NOISE STUDY BOUNDARY
- CAVERNS OF RELOCATED SHA TIN SEWAGE TREATMENT WORKS (UNDERGROUND)
- MAIN PORTAL AREA
- SECONDARY PORTAL AREA
- EXISTING SHA TIN SEWAGE TREATMENT WORKS
- A KUNG KOK SHAN ROAD SURFACE MAGAZINE SITE WITH ACCESS ROAD
- TEMPORARY WORKS AREA
- NR-D01/NR-C01
- NOISE SENSITIVE RECEIVERS

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PROJECT
項目

RELOCATION OF SHA TIN SEWAGE TREATMENT WORKS TO CAVERNS: CAVERNS AND SEWAGE TREATMENT WORKS - INVESTIGATION, DESIGN AND CONSTRUCTION

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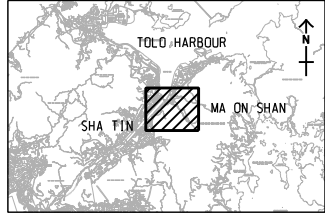
ISSUE/REVISION
修訂

NO.	DATE	DESCRIPTION	CHK.

STATUS
階段

SCALE 比例	DIMENSION UNIT 尺寸單位
A3 1: 10000	METRES

KEY PLAN A3 1: 50000



NSRS	DESCRIPTION
NR-C01	CHEVALIER GARDEN
NR-C02	WELLBORN KINDERGARTEN
NR-C03	HAY NIEN PRIMARY SCHOOL
NR-C04	MA ON SHAN TSUNG TSIN SECONDARY SCHOOL
NR-C05	TAI SHUI HANG VILLAGE
NR-C06	KAM TAI COURT
NR-C07	S.K.H. MA ON SHAN HOLY SPIRIT PRIMARY SCHOOL
NR-C08	A KUNG KOK FISHERMEN VILLAGE
NR-C09	HONG KONG MOUNTAINEERING UNION
NR-C10	THE NEIGHBOURHOOD ADVICE-ACTION COUNCIL HARMONY MANOR
NR-C11	SHING MUN SPRINGS REHABILITATION CENTRE
NR-D01	SEAVIEW VILLA
NR-D02	KAM ON GARDEN
NR-D03	SHA TIN LOOKOUT
NR-D04	EVERGREEN VILLA
NR-D05	RACECOURSE GARDENS

PROJECT NO.
項目編號

60334056

CONTRACT NO.
合約編號

CE 30/2014 (DS)

SHEET TITLE
圖紙名稱

LOCATIONS OF REPRESENTATIVE NOISE SENSITIVE RECEIVERS FOR CONSTRUCTION NOISE AND OPERATION FIXED PLANT NOISE

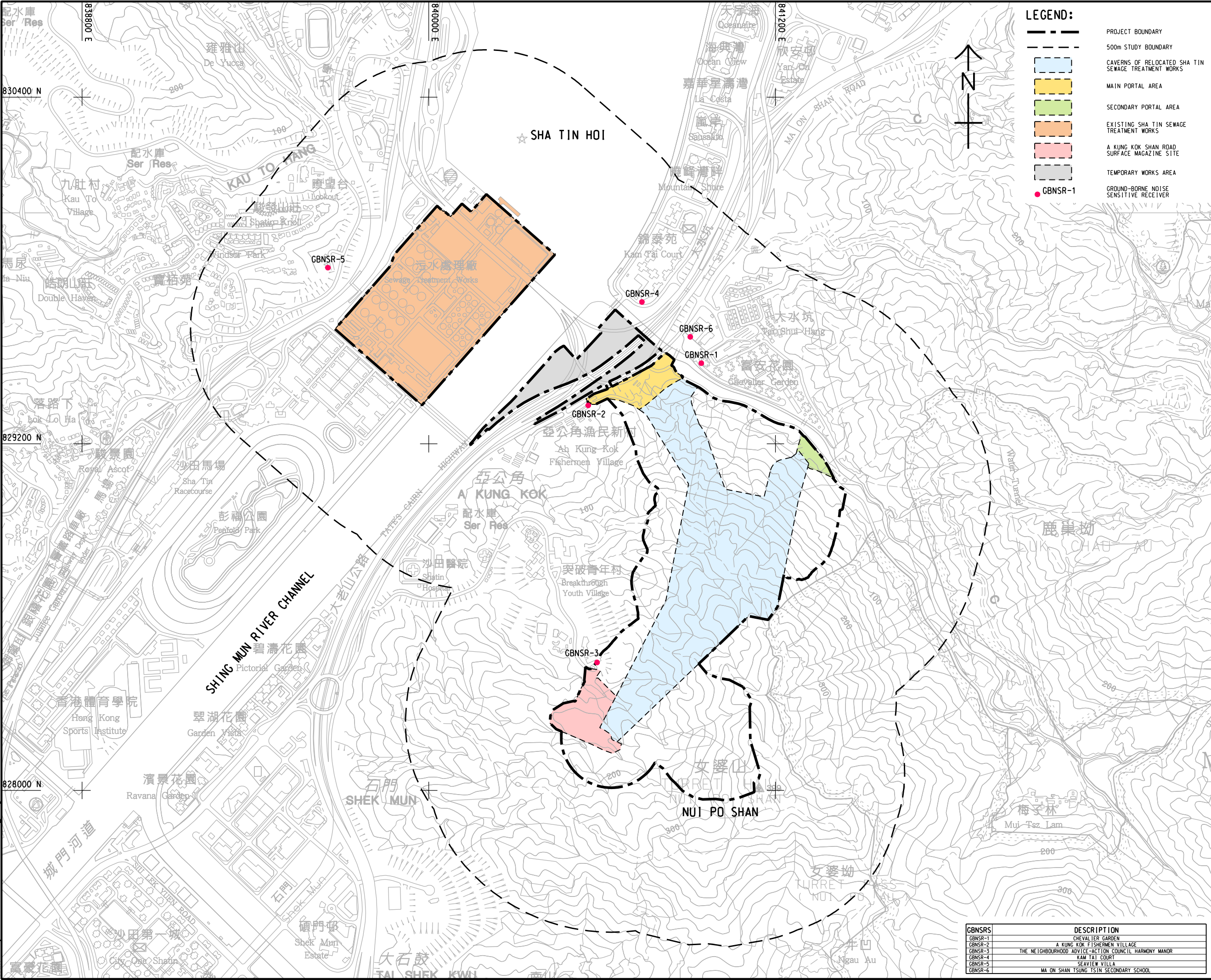
SHEET NUMBER
圖紙編號

60334056/ES/4.03

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GBNSRS	DESCRIPTION
GBNSR-1	CHEVALIER GARDEN
GBNSR-2	A KUNG KOK FISHERMEN VILLAGE
GBNSR-3	THE NEIGHBOURHOOD ADVICE-ACTION COUNCIL HARMONY MANOR
GBNSR-4	KAM TAI COURT
GBNSR-5	SEAVIEW VILLA
GBNSR-6	MA ON SHAN TSUNG TSIN SECONDARY SCHOOL



PROJECT
項目
RELOCATION OF SHA TIN SEWAGE TREATMENT WORKS TO CAVERNS: CAVERNS AND SEWAGE TREATMENT WORKS - INVESTIGATION, DESIGN AND CONSTRUCTION

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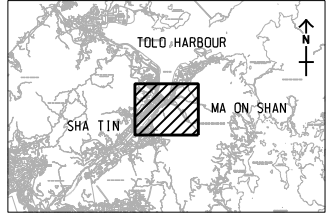
ISSUE/REVISION				
修訂				
I/R	DATE	DESCRIPTION	CHK.	
修訂	日期	內容描述	校核	

STATUS
階段

SCALE
比例
A3 1: 12000

DIMENSION UNIT
尺寸單位
METRES

KEY PLAN
索引圖
A3 1: 50000



PROJECT NO.
項目編號
60334056

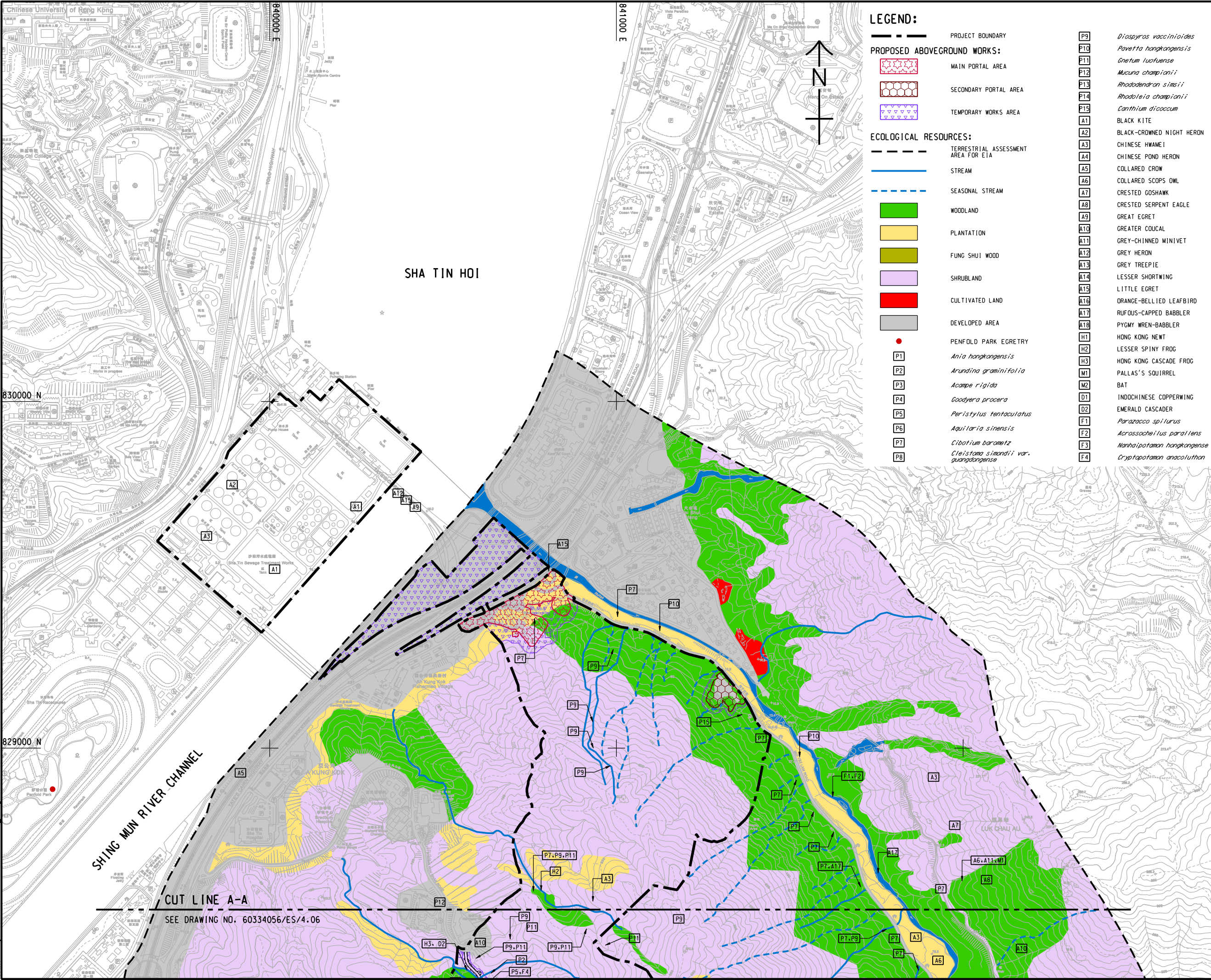
CONTRACT NO.
合約編號
CE 30/2014 (DS)

SHEET TITLE
圖紙名稱
LOCATIONS OF REPRESENTATIVE NOISE SENSITIVE RECEIVERS FOR GROUND-BORNE NOISE DURING CONSTRUCTION PHASE

SHEET NUMBER
圖紙編號
60334056/ES/4.04

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PROJECT
RELOCATION OF SHA TIN
SEWAGE TREATMENT
WORKS TO CAVERNS:
CAVERNS AND SEWAGE
TREATMENT WORKS -
INVESTIGATION, DESIGN
AND CONSTRUCTION

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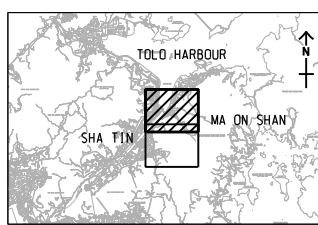
ISSUE/REVISION
修訂

I/R	DATE	DESCRIPTION	CHK.
01			
02			
03			
04			
05			
06			
07			
08			
09			
10			

STATUS
核准

SCALE
比例尺
A3 1: 10000
DIMENSION UNIT
尺寸單位
METRES

KEY PLAN
索引圖
A3 1: 50000

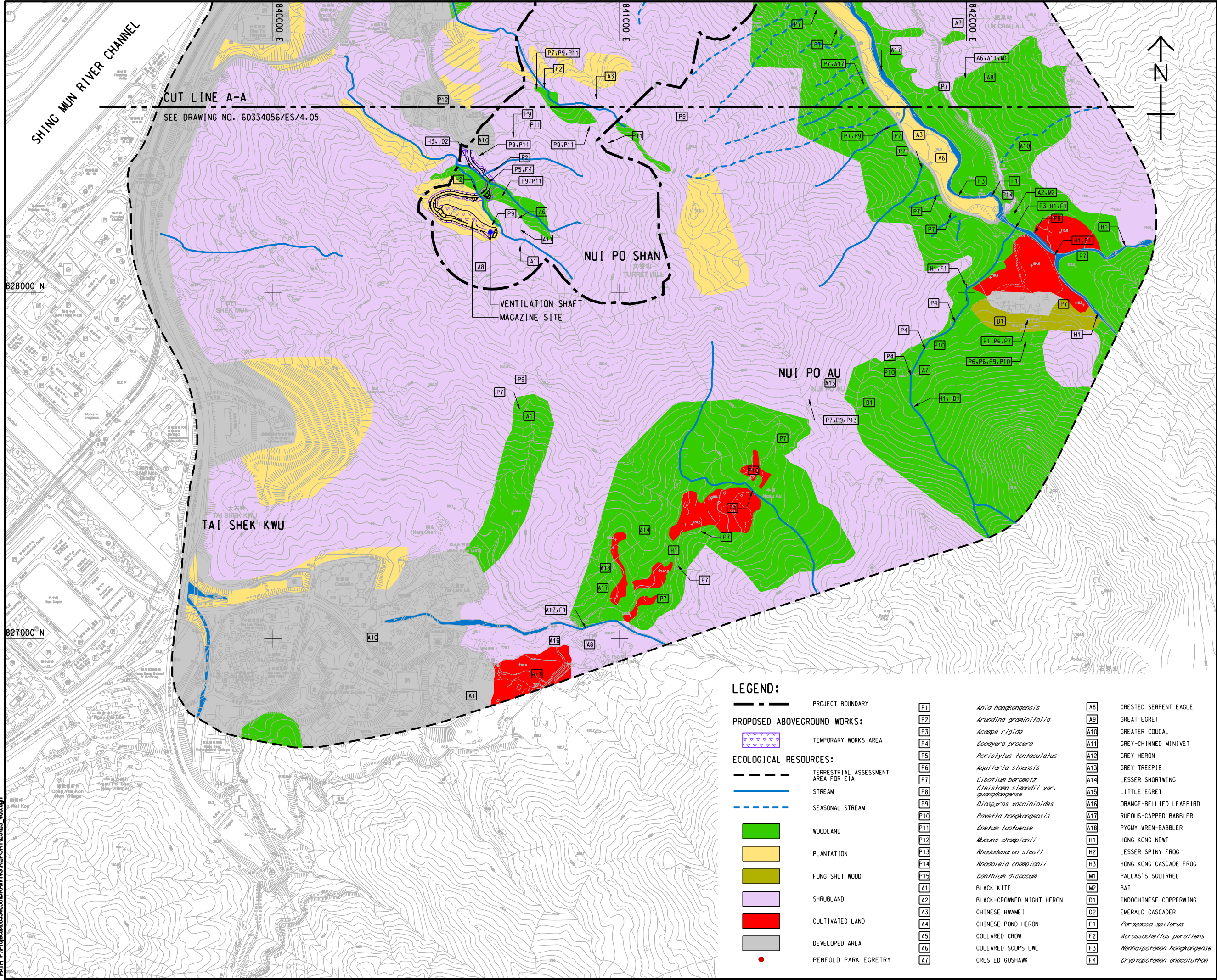


PROJECT NO.
項目編號
60334056
CONTRACT NO.
合約編號
CE 30/2014 (DS)

SHEET TITLE
圖紙名稱
HABITAT MAP

SHEET NUMBER
圖紙編號
60334056/ES/4.05
SHEET 1 OF 2

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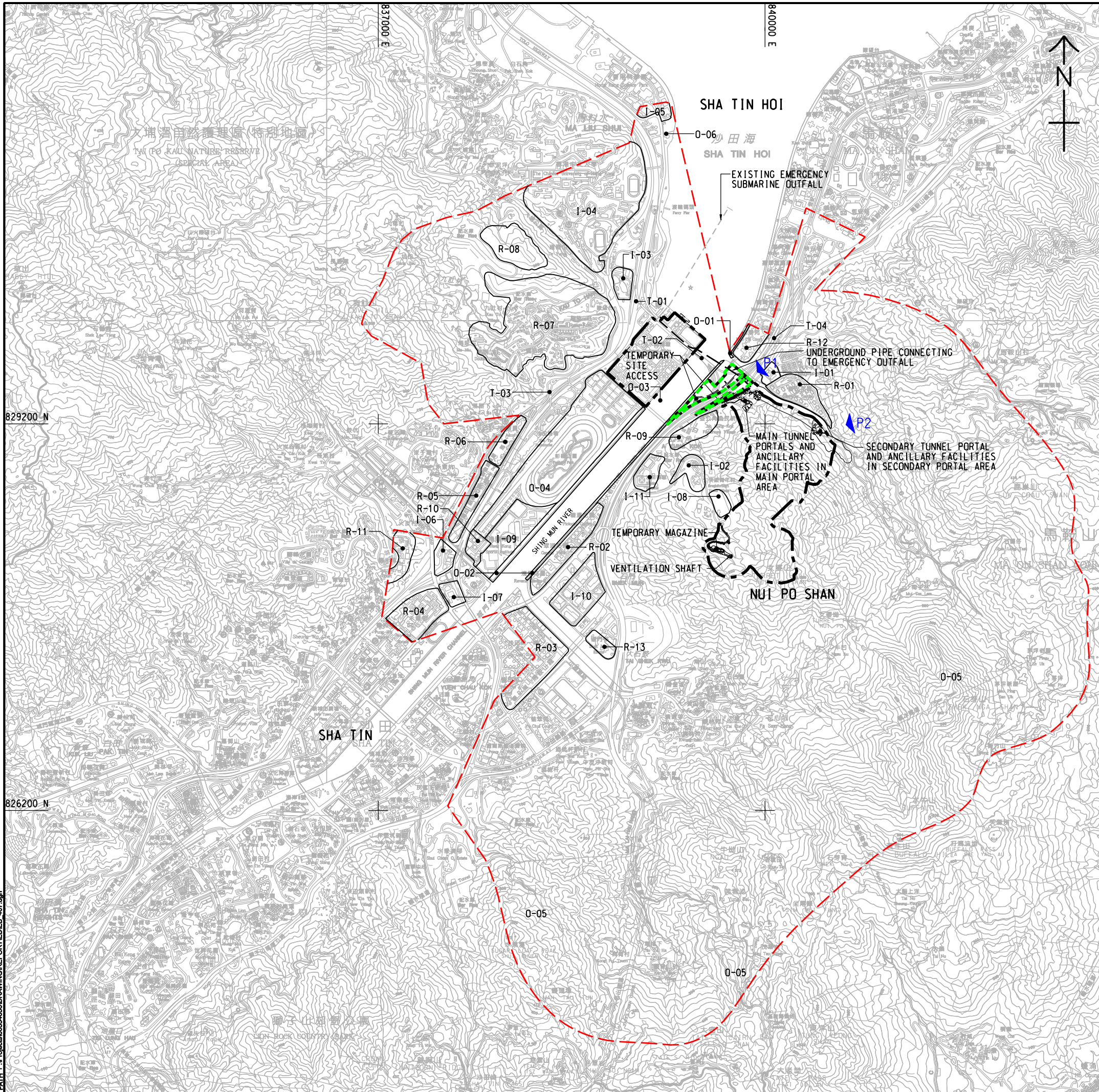
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Project Management Initials:



LEGEND:

- PROJECT BOUNDARY
- VISUAL ENVELOPE
- TEMPORARY WORKS AREA
- PHOTOMONTAGE VIEWPOINT

VSR GROUPS

	RESIDENTIAL VSRS
R-01	RESIDENTS IN CHEVALIER GARDEN
R-02	RESIDENTS IN PICTORIAL GARDEN, GARDEN VISTA, RAVANA GARDEN, ETC
R-03	RESIDENTS IN CITY ONE
R-04	RESIDENTS IN WO CHE ESTATE
R-05	RESIDENTS IN FO TAN INCLUDING JUBILEE GARDEN AND THE PALAZZO
R-06	RESIDENTS IN ROYAL ASCOT
R-07	RESIDENTS IN LOW RISE PRIVATE RESIDENTIAL DEVELOPMENTS AT KAU TO SHAN INCLUDING WINDSOR PARK, KAM ON GARDENS, GREENLAND VILLAS, YUCCA VILLA, PINE VILLA, JADE VILLA, WINDSOR HEIGHTS, EVERGREEN GARDENS, DOUBLE HAVEN HOUSE, FOREST HILL, GREENERY VILLAS AND SHATIN KNOLL, ETC.
R-08	RESIDENTS IN POTENTIAL RESIDENTIAL DEVELOPMENT AT LAI PING ROAD
R-09	RESIDENTS IN AH KUNG KOK FISHERMEN VILLAGE
R-10	RESIDENTS IN THE HONG KONG JOCKEY CLUB SHATIN STAFF QUARTERS
R-11	RESIDENTS IN SUI WO COURT
R-12	RESIDENTS IN KAM TAI COURT
R-13	RESIDENTS IN SHEK MUN ESTATE
	INSTITUTIONAL VSRS
I-01	OCCUPANTS IN TSUNG TSIN SECONDARY SCHOOL AND KOWLOON CITY BAPTIST CHURCH HAY NIEN PRIMARY SCHOOL
I-02	OCCUPANTS IN SHATIN HOSPITAL, BRADBURY HOSPICE AND CHESHIRE HOME
I-03	OCCUPANTS IN HYATT REGENCY HONG KONG
I-04	OCCUPANTS IN CHINESE UNIVERSITY OF HONG KONG
I-05	OCCUPANTS IN HONG KONG SCIENCE PARK
I-06	OCCUPANTS IN JOCKEY CLUB TI-I COLLEGE
I-07	OCCUPANTS IN HONG KONG INSTITUTE OF VOCATIONAL EDUCATION
I-08	OCCUPANTS IN THE NEIGHBOURHOOD ADVICE-ACTION COUNCIL HARMONY MANOR
I-09	OCCUPANTS IN HONG KONG SPORTS INSTITUTE
I-10	OCCUPANTS IN SHEK MUN INDUSTRIAL AREA
I-11	OCCUPANTS IN SHATIN HOSPITAL
	RECREATIONAL VSRS
O-01	RECREATIONAL USERS IN MA ON SHAN PROMENADE
O-02	RECREATIONAL USERS INCLUDING CYCLISTS ALONG CYCLE TRACK IN THE PROMENADES AT BOTH SIDES OF THE SHING MUN RIVER CHANNEL
O-03	WATER BASED RECREATIONAL USERS IN THE WATERBODIES FROM TOLO HARBOUR TO SHING MUN RIVER CHANNEL
O-04	RECREATIONAL USERS IN SHA TIN RACECOURSE AND PENFOLD PARK
O-05	HIKERS IN WALKING TRAILS
O-06	RECREATIONAL USERS IN PAK SHEK KOK PROMENADE
	TRAVELLING VSRS
T-01	TRAVELLERS ALONG TOLO HIGHWAYS
T-02	TRAVELLERS ALONG TATE'S CAIRN HIGHWAYS
T-03	PASSENGERS ON MTR EAST RAIL LINE
T-04	TRAVELLERS ALONG MA ON SHAN ROAD AND MTR MA ON SHAN RAIL

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PROJECT

RELOCATION OF SHA TIN SEWAGE TREATMENT WORKS TO CAVERNS: CAVERNS AND SEWAGE TREATMENT WORKS - INVESTIGATION, DESIGN AND CONSTRUCTION

CLIENT

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Drainage Services Department

CONSULTANT

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ISSUE/REVISION

REV	DATE	DESCRIPTION	CHK.

STATUS

擬定

SCALE

比例

A3 1: 30000

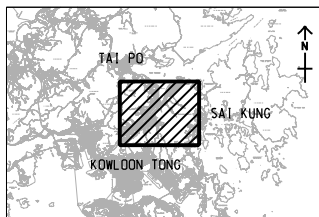
DIMENSION UNIT

尺寸單位

METRES

KEY PLAN

索引圖 A3 1: 1000000



PROJECT NO.

項目編號

60334056

CONTRACT NO.

合約編號

CE 30/2014 (DS)

SHEET TITLE

圖紙名稱

VISUAL ENVELOPE AND VISUALLY SENSITIVE RECEIVERS

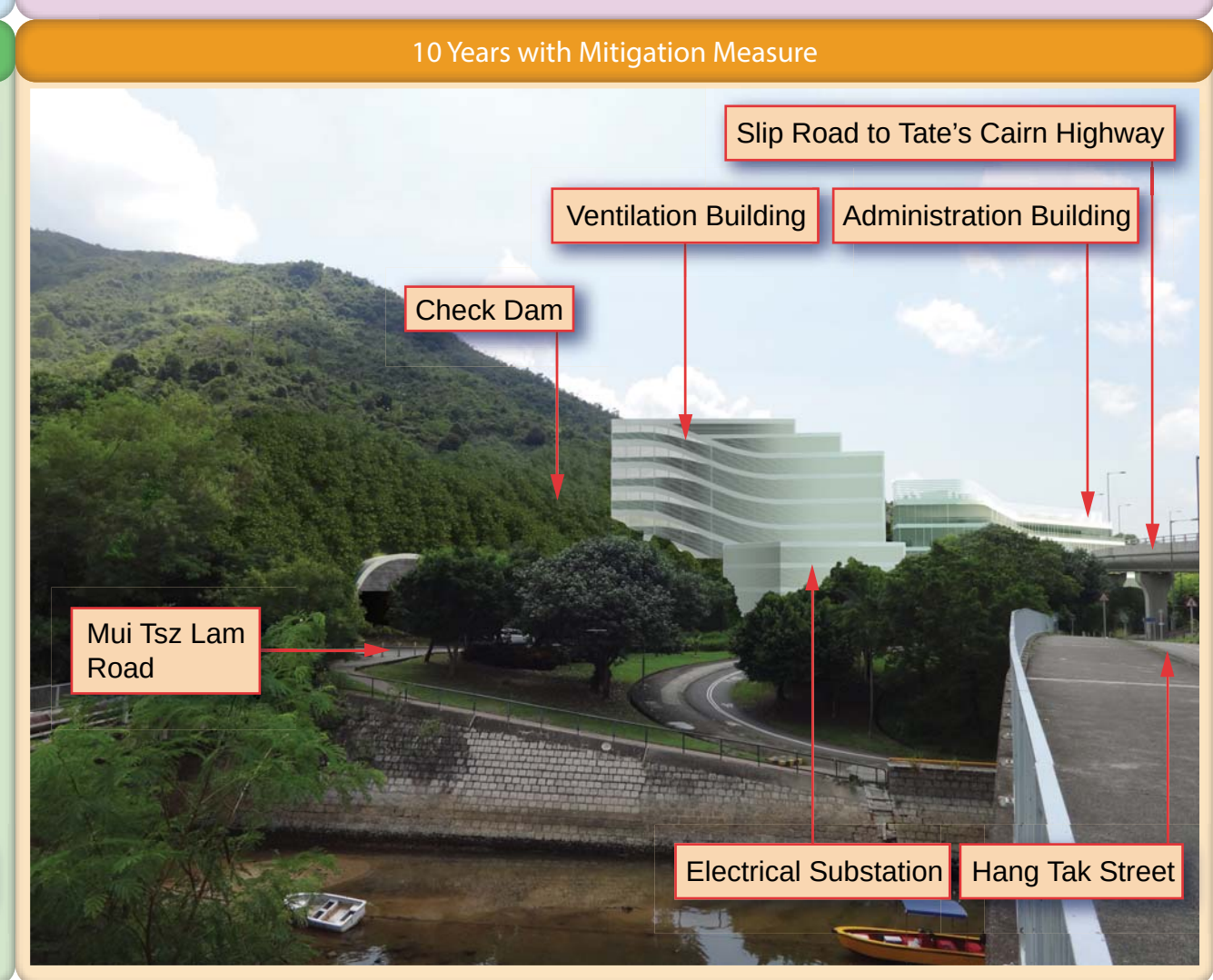
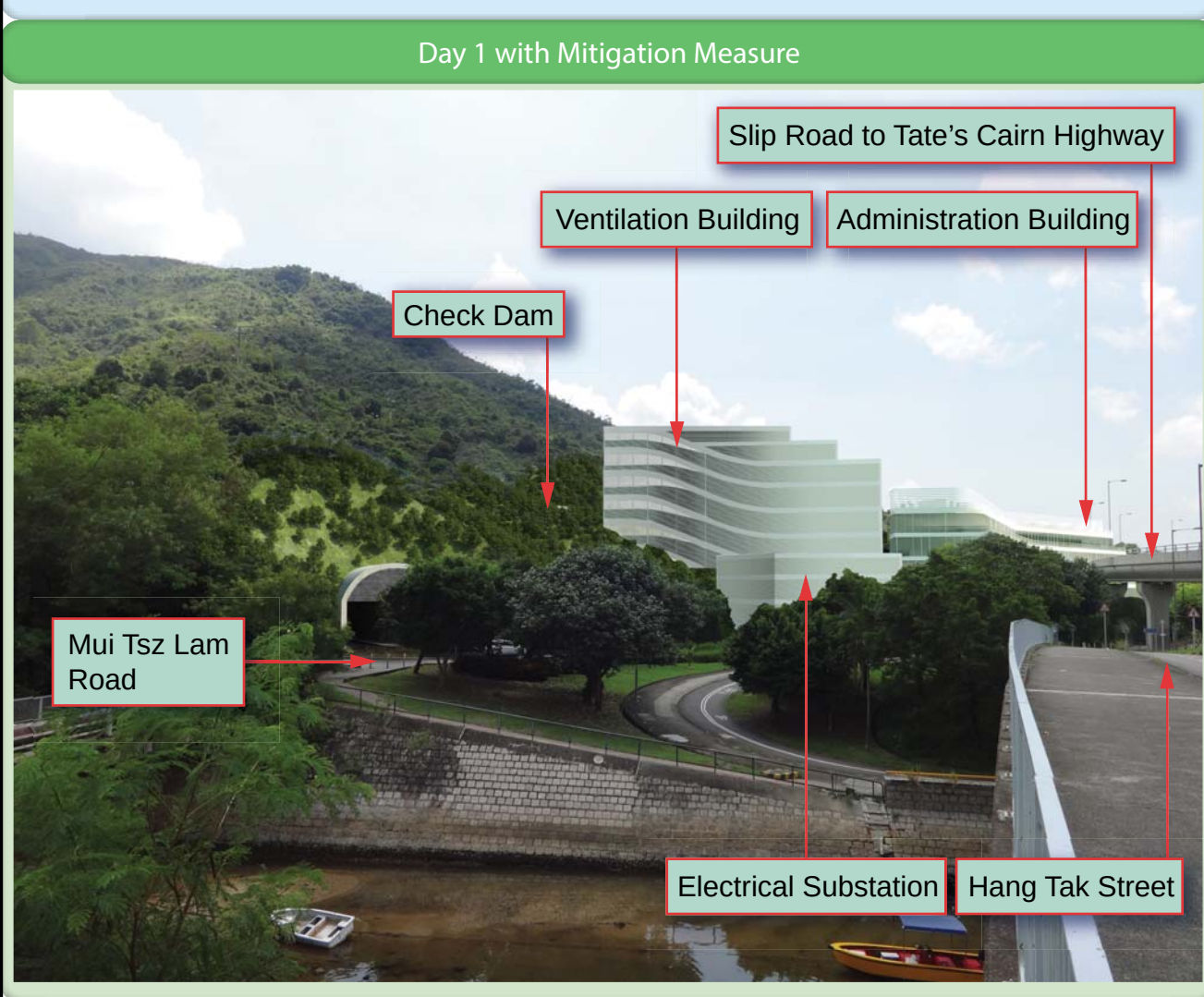
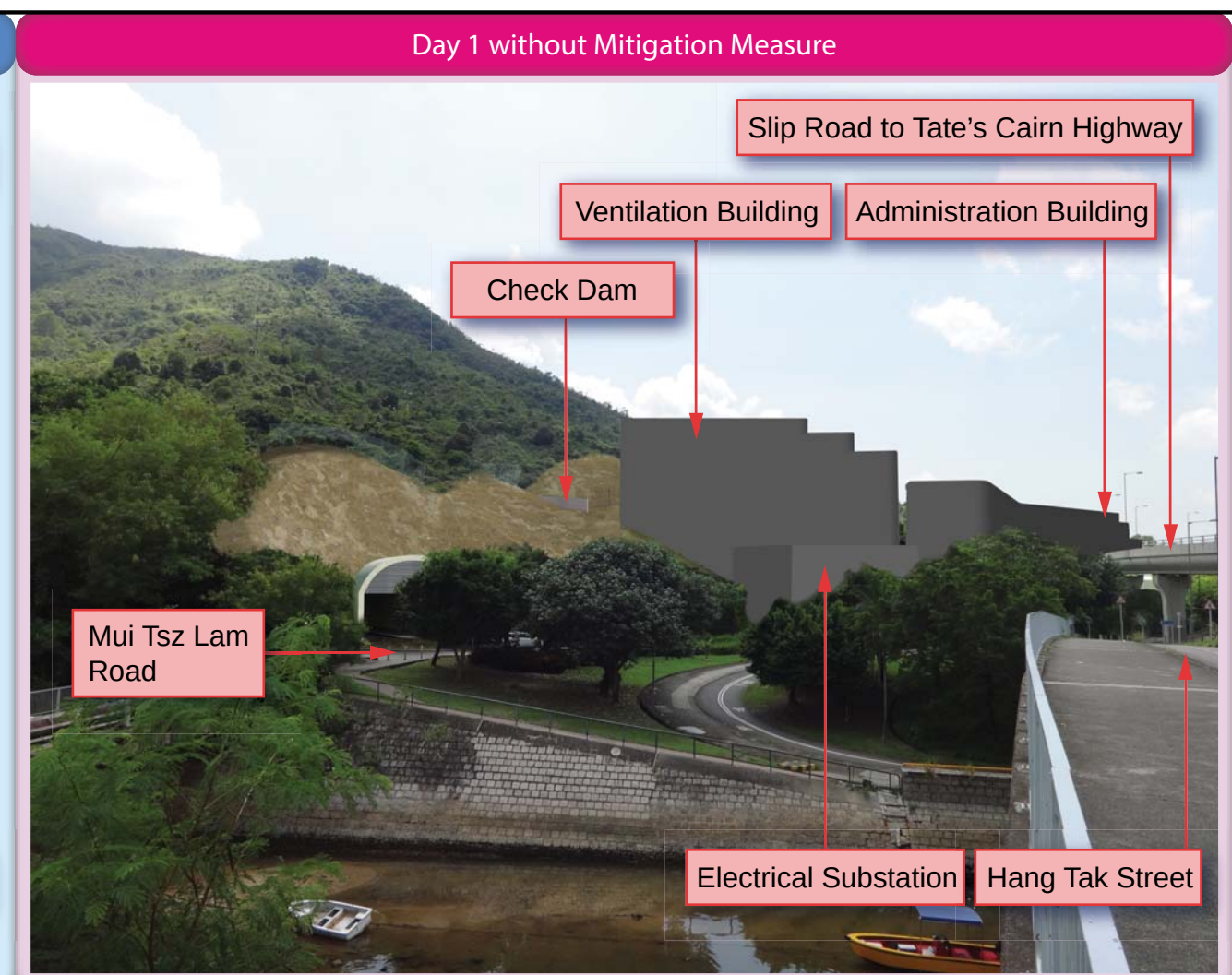
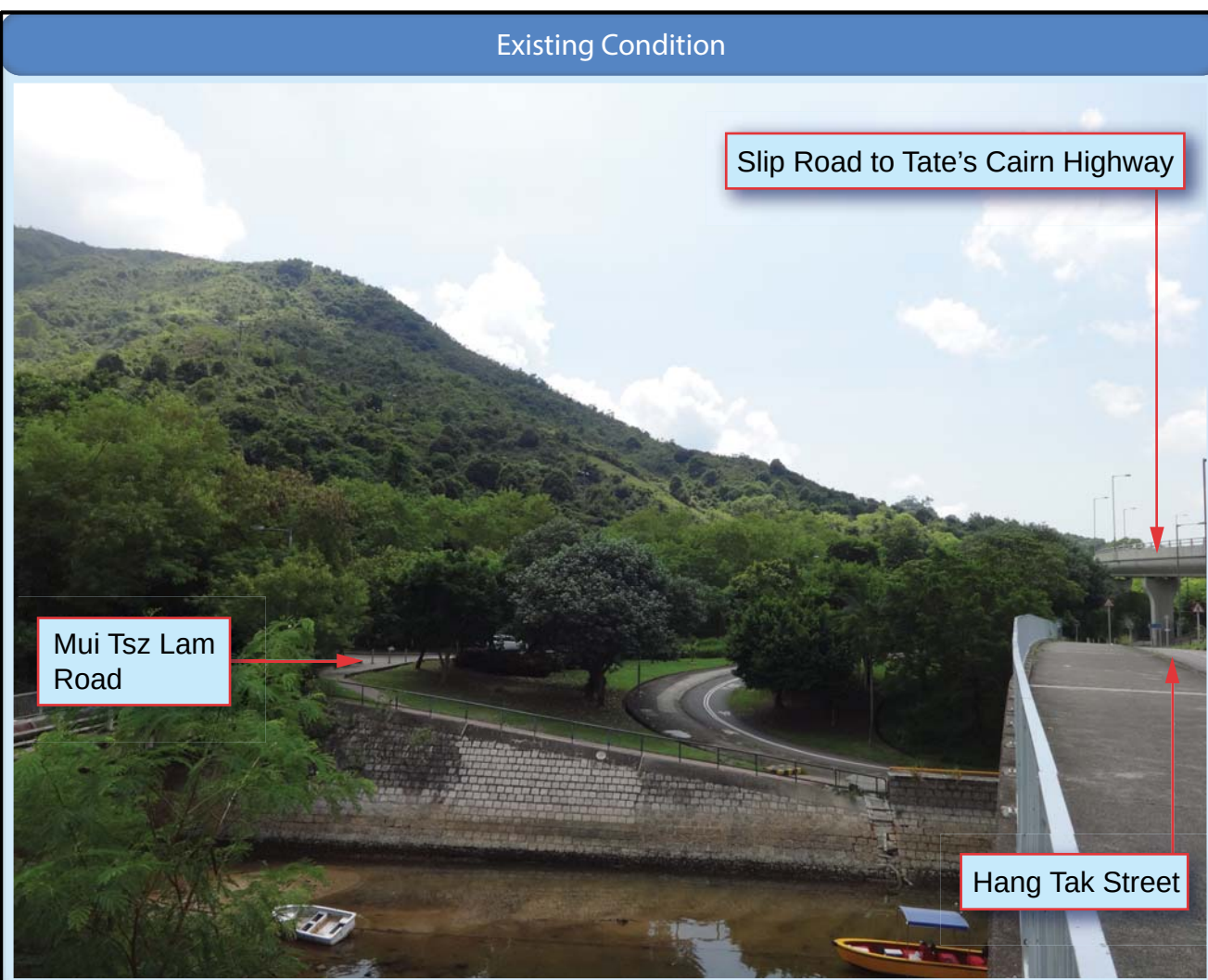
SHEET NUMBER

圖紙編號

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PROJECT
RELOCATION OF SHA TIN SEWAGE TREATMENT WORKS TO CAVERNS: CAVERNS AND SEWAGE TREATMENT WORKS - INVESTIGATION, DESIGN AND CONSTRUCTION

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修訂

I/R	DATE	DESCRIPTION	CHK.

STATUS
階段

SCALE
比例
N.T.S.

DIMENSION UNIT
尺寸單位
METRES

KEY PLAN
索引圖

PROJECT NO.
項目編號
60334056

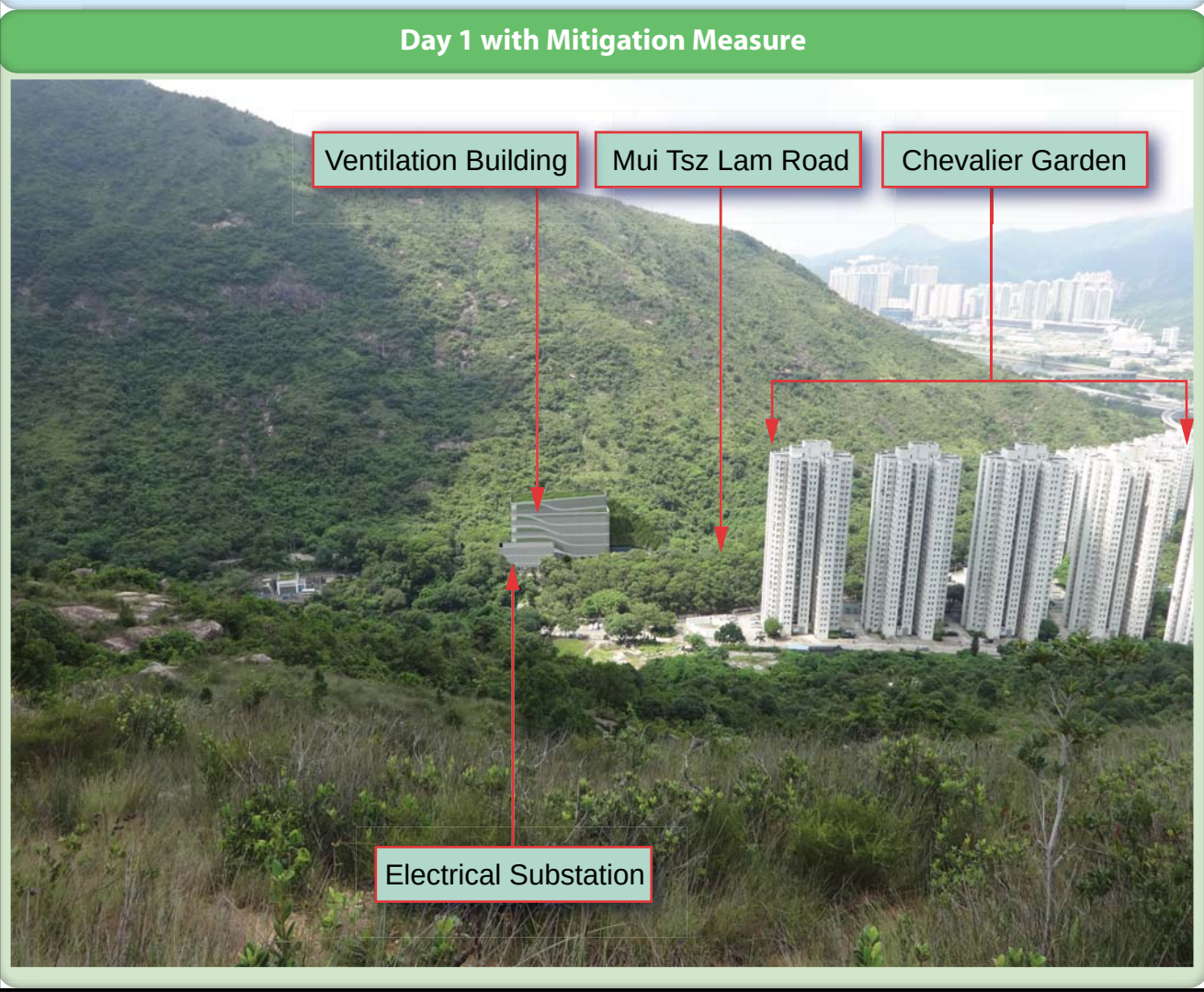
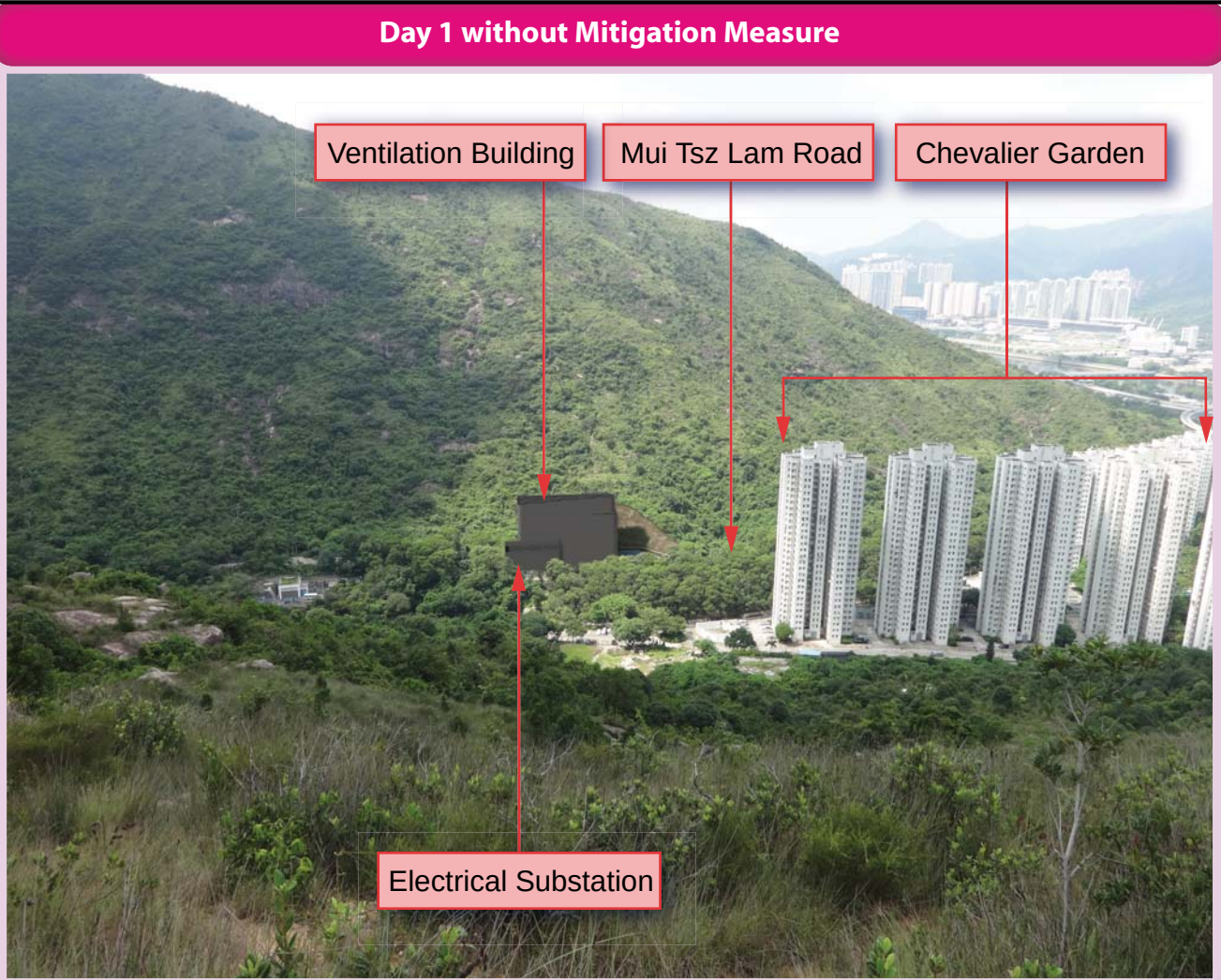
CONTRACT NO.
合約編號
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SHEET TITLE
圖紙名稱
PHOTOMONTAGE P1

SHEET NUMBER
圖紙編號
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PROJECT
項目

RELOCATION OF SHA TIN
SEWAGE TREATMENT
WORKS TO CAVERNS:
CAVERNS AND SEWAGE
TREATMENT WORKS -
INVESTIGATION, DESIGN
AND CONSTRUCTION

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ISSUE/REVISION
修訂

I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 核對

STATUS
階段

SCALE
比例

DIMENSION UNIT
尺寸單位

N.T.S. METRES

KEY PLAN
索引圖

PROJECT NO.
項目編號

60334056

CONTRACT NO.
合約編號

CE 30/2014 (DS)

SHEET TITLE
圖紙名稱

PHOTOMONTAGE P2

SHEET NUMBER
圖紙編號

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**Item A - Brief Summary of Traffic Impact Assessment for
Proposed Sha Tin Cavern Sewage Treatment Works at Nui Po Shan of A Kung Kok**

Background

A site currently zoned “Green Belt” (“GB”) at Nui Po Shan of A Kung Kok has been identified for the relocation of STSTW to cavern. The site will be rezoned from “GB” to “Green Belt (1)” (“GB (1)”) to facilitate the development of the Sha Tin Cavern Sewage Treatment Works (STCSTW) at underground.

Two sites located at A Kung Kok Street and Mui Tsz Lam Road will be rezoned from “GB” to “Other Specified Uses” annotated “Sewage Treatment Works” (“OU(STW)”) to accommodate supporting facilities (i.e. administration building, electricity substation, plant room and ventilation building) to support the operation of the STCSTW.

To ascertain the feasibility of the proposed STCSTW, the Drainage Services Department (DSD) has carried out a Traffic Review and the results are summarized as follows:

Traffic Review

Based on the recent traffic survey conducted, all road links are currently operating within an acceptable level while all critical junctions are operating within capacity except for J/O Tai Chung Kiu Road / Banyan Bridge (Fo Tan Road) and J/O Fo Tan Road / Yuen Wo Road which are currently operating beyond capacity during peak periods.

Traffic flow along A Kung Kok Street would be approaching design capacity during future design years which introduction of heavy construction traffic onto A Kung Kok Street is not recommended. Alternative access schemes for construction vehicles, including the provision of two temporary access roads and a steel bridge are proposed so as to minimize construction traffic impact onto road network in vicinity of the relocated STSTW site.

As Sha Tin Rural Committee Road serves as the main road from the relocated STSTW site to/from Tuen Mun Area 38 Fill Bank, critical junctions including J/O Tai Po Road Slip Road / Sha Tin Rural Committee Road, J/O Sha Tin Rural Committee Road / Yuen Wo Road, J/O Sha Tin Wai Road / Tai Chung Kiu Road and J/O Sha Tin Road / Sha Tin Wai Road will operate beyond capacity if construction traffic are discharging during peak hours. In order to minimize construction traffic onto the critical junctions, discharging hours for construction vehicles will be restricted to non-peak hours.

To avoid additional traffic impact to A Kung Kok Street while enhancing the traffic circulation to the relocated STSTW, a new access arrangement with junction improvement works at J/O A Kung Kok Street / Mui Tsz Lam Road are proposed by introducing a one-way access road to Ma on Shan Road while transforming the existing junction from a priority junction to a signalized junction.

As the peak hour operation traffic is estimated to be around 35pcu per direction during peak hour, the traffic impact of the relocated STSTW during operation stage is considered minimal.

**Item B - Brief Summary of Traffic Impact Assessment for
Columbarium and Garden of Remembrance at On Hing Lane, Shek Mun, Sha Tin**

Background

To meet the public demand for niches, the Government has been exploring various potential sites in the territory for columbarium development. The sites at On Hing Lane, which are now zoned “I”, “GB” and “OU(RTS)” respectively, are proposed to rezone to “OU(Columbarium and Garden of Remembrance)” to facilitate the columbarium and garden of remembrance development.

A Traffic Impact Assessment, which has taken into account the new developments nearby and the new operation mode of the Sha Tin Refuse Transfer Station (RTS) as well as the proposed pedestrian underpass, was carried out to ascertain the feasibility of the proposed columbarium and garden of remembrance development. The results are summarized as follows:

Traffic Review

Five critical road junctions and six critical pedestrian walkways within the Study Area were assessed in the light of vehicular and pedestrian traffic forecast for the Ching Ming and Chung Yeung Festival periods in design years 2021 and 2026 covering the Festival peak day, and the immediate Saturdays, Sundays and weekday.

All of the critical road junctions and pedestrian walkways were found to operate satisfactorily in the peak hours during the Ching Ming and Chung Yeung Festival periods up to 2026, except for the footpaths on both sides of On Hing Lane during the Ching Ming Festival day.

The existing footpaths on both sides of On Hing Lane would operate at marginal Level of Service (LOS) for full development of 40,000 niches without any traffic improvement measures.

Proposed Improvement Measures

In order to relieve the pressure on the footpaths along On Hing Lane, it has been considered to implement special traffic and transport arrangements, depending on the prevailing crowd and traffic situation on the days near Chung Yeung Festival.

Based on the estimation on the visitor demand of the proposed columbarium, about 60% of visitors would travel by MTR. It is anticipated the carrying capacity of Ma On Shan Line is more than adequate to cope with the additional passenger demand arise from the proposed columbarium under the current peak hour configuration.

In order to improve the LOS of the walkways along On Hing Lane, it has been alternatively considered to partially close On Hing Lane maintaining a 3.5m wide traffic lane for ingress/egress of refuse collection vehicle (RCV) to/from the Sha Tin RTS on Ching Ming and Chung Yeung Festival Days with temporary traffic control and temporary traffic lane reconfiguration on On Muk Street. This could still cater for the visitor demand for full development of 40,000 niches with satisfactory LOS.

However, if either the niches or trip rates were increased by 20%, On Hing Lane have to be closed partially during Ching Ming Festival day. In addition, On Muk Street eastern footpath may suffer a little pedestrian congestion during the peak hour on Ching Ming Festival Day. Nevertheless, if this happened, the local pedestrian congestion would occur only in the peak

hour on Ching Ming Festival Day once a year which is considered tolerable from the sensitivity test perspective.

Sensitivity tests have been carried out with full development (i.e. 40,000 niches) with partial road closure of On Hing Lane and pedestrian scheme is implemented on Ching Ming and Chung Yeung Festival Days, would not induce adverse traffic impacts in case i) the trip rates are underestimated by 20%; ii) the proposed no. of niches are increased by 20%; or iii) the background traffic is underestimated by 20%, except that a little local pedestrian congestion is anticipated at On Muk Street in peak hour on Ching Ming Festival Day in cases i) and ii).

As a large number grave-sweepers are expected in the vicinity during Ching Ming and Chung Yeung Festival periods, special traffic and transport arrangements may be implemented, depending on the prevailing crowd and traffic situation by TD and HKPF on the days near Ching Ming and Chung Yeung Festivals.

Cautionary crossings at the northern and southern arms of the future roundabout at On Ming Street/ On Yiu Street and signalised pedestrian crossing at On Ming Street would be manual control by HKPF to enhance pedestrian safety at the crossing during the peak period on Ching Ming and Chung Yeung Festivals.

To enhance road safety, a pedestrian underpass with an optimum width of 7m is proposed underneath Tate's Cairn Highway as the major access connecting On Muk Street and the proposed columbarium site. With the provision of the subway, the partial road closure of On Hing Lane would not be required. Thus operation of the Sha Tin RTS would not be affected and road safety would be enhanced.

Conclusion

It is concluded that the proposed full development of 40,000 new niches in the proposed Shek Mun Columbarium to be completed in 2021 would have impacts on the surrounding road network and walkway system during the Ching Ming and Chung Yeung Festival periods up to year 2026, and needs the following improvements:

Option 1

- (a) it would necessitate the partial closure of the carriageway width on On Hing Lane for vehicular traffic and pedestrianisation with crowd control management for columbarium visitors on Ching Ming and Chung Yeung Festival Days;
- (b) it would require to maintain a 3.5m wide traffic lane along On Hing Lane for accessibility of RCVs to Sha Tin RTS during the partial road closure period on Ching Ming and Festival Days; and
- (c) it would necessitate to implement pedestrian and crowd control management on on Ching Ming and Chung Yeung Festival Days.

Option 2

- (a) a pedestrian underpass with an optimum width of 7m connecting On Muk Street and the proposed columbarium site; and
- (b) it would necessitate to implement pedestrian and crowd control management on on Ching Ming and Chung Yeung Festival Days.

**Item B - Visual Appraisal for Provision of Columbarium and Garden of Remembrance
at On Hing Lane, Shek Mun, Shatin**

A) Purpose

1. This Visual Appraisal (VA) is to examine the possible visual impact of the proposed columbarium and garden of remembrance (GoR) development so as to facilitate the rezoning of the Site from “Industrial” (“I”) , “Green Belt” (“GB”) and “Other Specified Uses” annotated “Refuse Transfer Station” (“OU (RTS)”) to “Other Specified Uses” annotated “Columbarium and Garden of Remembrance” (“OU (Columbarium and Garden of Remembrance)”).

B) Subject Site and Area Context

2. The subject site covering a land area of about 2.69 ha is located at On Hing Lane, Shek Mun, Sha Tin. It is bounded by a vegetated man-made slope zoned “GB” to the north, east and south, the Sha Tin Refuse Transfer Station zoned “OU(RTS)” to the west and the Tate’s Cairn Highway to the northwest. (**Plan 1**)

3. The site is currently zoned “I”, “GB” and “OU (RTS)” on the approved Sha Tin Outline Zoning Plan (OZP) No. S/ST/32. The site is a piece of government land which is occupied by the Construction Industry Council for use as a training ground consisting of a 4-storey building with a maximum building height of about 33mPD under a short term tenancy. The existing building and structure would be demolished by the tenant before handover.

4. Bounded by vegetated man-made slope at its immediate north, east and south, the proposed development and the existing Sha Tin Refuse Transfer Station (about 28mPD) at its immediate southwest are located within a fringe context being segregated by the elevated Tate’s Cairn Highway (approx. 13mPD) at its west from the core area of Shek Mun. Across the Tate’s Cairn Highway, the closest developments to the proposed columbarium are Shek Mun Estate (maximum Building Height ‘BH’ approximately 140mPD) and the Hong Kong Baptist University – School of Continuing Education and International Christian School (about 68mPD). The other residential developments in the vicinity include Yu Chui Court (about 98 to 121mPD) and City One (about 82-108mPD).

C) The Proposed Columbarium Development

5. The proposal involves the construction of aesthetically-designed, multi-storey columbarium block providing about 40,000 niches, a GoR with spacious lawns for scattering of ashes and designated walls for mounting of plaques in memory of the deceased (**Plan 2**). The proposed preliminary development parameters are listed in the table below.

Site Area	about 2.69ha
Maximum Building Height (BH)	not more than 4 Storeys (35.5mPD*)
No. of Niches	about 40,000

6. The proposed development mainly comprises a low-rise niche block (reaching about 35.5mPD*) and it is aesthetically designed with ample landscaping works at GoR to minimize visual impact and blend in with the existing environment. For better understanding on the spatial relationship between the proposed development and its surrounding environment including major residential developments in the locality, photomontages and section drawings are presented at **Plans 3 to 6**. The overall layout of the columbarium block will be subject to detailed architectural design at the subsequent stage.

Note:

* The building height of 35.5mPD is for indicative only at this preliminary design stage, subject to changes in detailed architectural design at the subsequent stage

D) Visual Appraisal

7. The following four viewpoints viewing from popular pedestrian nodes accessible by the public have been identified (**Figure 1**).

- View A: Viewed from recreational cycle track on On Muk Street
- View B: Viewed from Hong Kong Baptist University and International Christian School
- View C: Viewed from Shek Mun Estate Phase 1 and Phase 2
- View D: Viewed from recreational Cycling Arena on Siu Lek Yuen Road Playground

Four photomontages (**Figures 2 to 5**) are prepared to illustrate the possible visual impact of the proposed development at the selected viewpoints.

View A: Viewed from recreational cycle track on On Muk Street

8. This viewpoint is located at the junction of On Ming Street and On Muk Street to the west of the site and is very close to the Shek Mun MTR Station with a relatively high pedestrian flow serving as an access to/from the Hong Kong Baptist University Affiliated School Wong Kam Fai Secondary School. The viewpoint is also located along the cycle track which connects to the City One and Ma On Shan area with frequent flow by cyclists. The visual sensitivity of this viewpoint is considered to be high.
9. The photomontage (**Figure 2**) shows that the proposed columbarium and GoR development was blocked by the elevated Tate's Cairn Highway and is obscured by tall trees and dense vegetation in the foreground. In view of the above, the proposed development is hence considered visually acceptable from this viewpoint.

View B: Viewed from Hong Kong Baptist University and International Christian School

10. This viewpoint is located at the junction of On Muk Lane and On Muk Street to the west of the site with a relatively high pedestrian flow serving as an access to/from the Hong Kong Baptist University College of International Education and the International Christian School. The visual sensitivity of this viewpoint is considered to be high.
11. The photomontage (**Figure 3**) shows that the proposed columbarium and GoR development is totally concealed by the tall trees and dense vegetation along the western side of the elevated Tate's Cairn Highway. In view that the proposed columbarium and GoR development is not visible from this view point, the proposed development is considered not visually incompatible with the surrounding areas.

View C: Viewed from Shek Mun Estate Phase 1 and Phase 2

12. This viewpoint is located at On Muk Street to the southwest of the site adjacent to Shek Mun Estate with high pedestrian flow mainly generated from the public housing development. The visual sensitivity of this viewpoint is considered to be high.
13. The photomontage (**Figure 4**) shows that the proposed columbarium and GoR development is screened off by the tall trees and slope with dense vegetation along the western side of the elevated Tate's Cairn Highway. In view that the proposed columbarium and GoR

development is not visible from this view point, the proposed development is considered not visually incompatible with the surrounding areas.

View D: Viewed from recreational Cycling Arena on Siu Lek Yuen Road Playground

14. This viewpoint is located at public open space along Shing Mun River is easily accessible by the residents and workers from the surrounding industrial-office buildings and residential developments. This view point is also located along the cycle track network and adjacent to the Cycling Arena on Siu Lek Yuen Road Playground with frequent flow by cyclist. The visual sensitivity of this viewpoint is considered to be high.
15. The photomontage (**Figure 5**) shows that the proposed columbarium and GoR development is visually obstructed by the Kin Shek House and Mei Shek House of Shek Mun Estate Phase 1 and will be fully blocked after the completion of Shek Mun Estate Phase 2. In view that the proposed columbarium and GoR development is not visible from this viewpoint, the proposed development is considered not visually incompatible with the surrounding areas.

E) Conclusion

16. The VA indicates that the proposed columbarium is not visually incompatible with the surrounding areas. For the vantage points at cycle track on On Muk Street (View A), Hong Kong Baptist University and International Christian School (View B), Shek Mun Estate Phase 1 & 2 (View C), and Cycling Arena at Siu Lek Yuen Road Playground (View D) where the pedestrian or visitor flow are relatively high, the proposed columbarium development is totally concealed by tall trees and slope with dense vegetation, the elevated Tate's Cairn Highway, and existing residential development. The visual impacts experienced by the receivers at key public viewpoints are insubstantial as per compared with the existing condition.
17. To minimize the visual impact and make the environment pleasant, the proposed columbarium building will be aesthetically-designed and blended in well with its surrounding context. Ample landscaping works will also be adopted to enhance the landscape character of the area. The layout and building height of the columbarium block will be subject to detailed architectural design at the subsequent stage.

Attachments

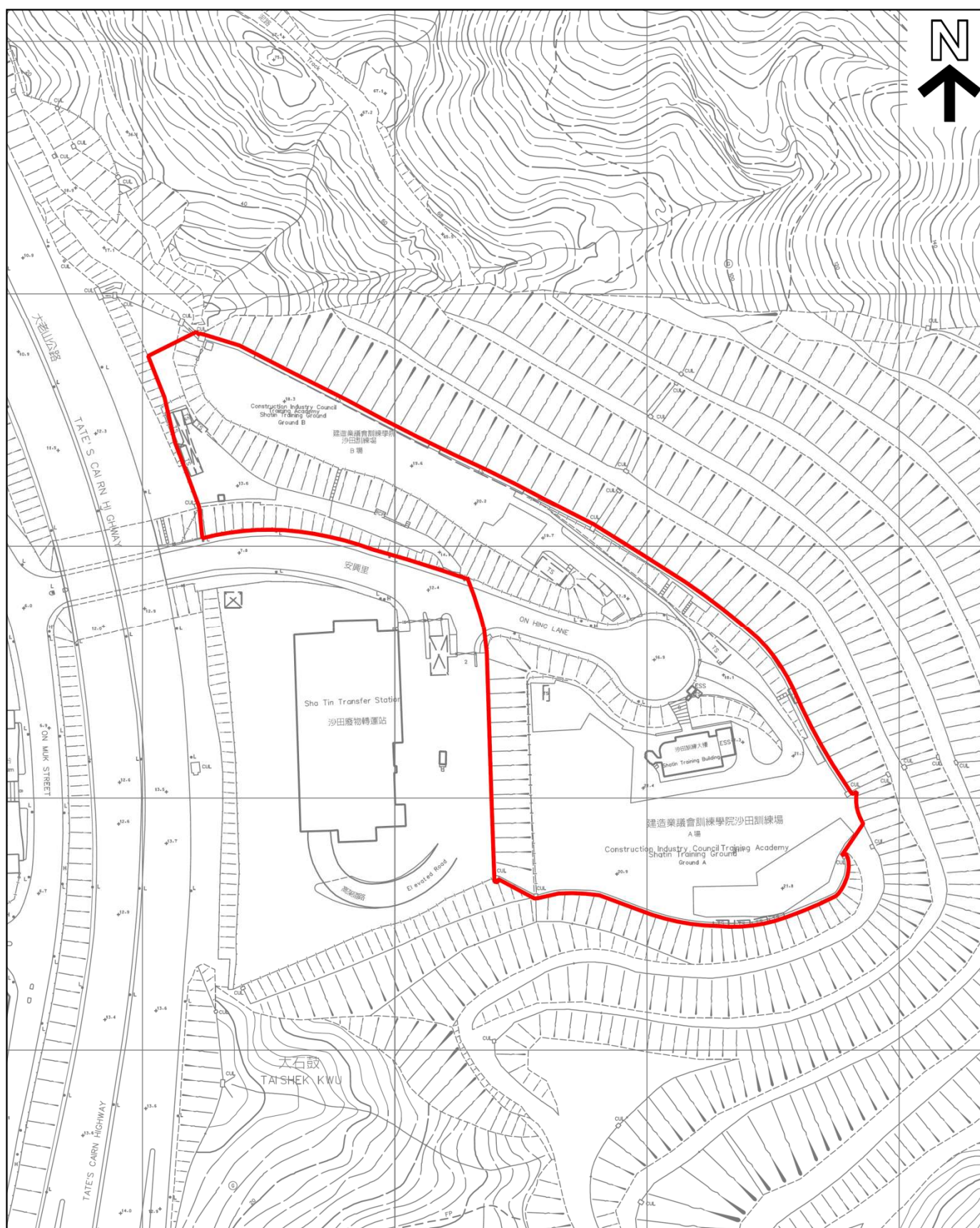
- Plan 1 Site Location Plan
- Plan 2 Preliminary Concept Plan
- Plan 3 Section Plan from Greenhill Villa
- Plan 4 Section Plan from Castello
- Plan 5 Section Plan from Kin Shek House
- Plan 6 Bird's-eye View from Kin Shek House

- Figure 1 Viewpoints from popular pedestrian nodes accessible by the public
- Figure 2 View A: Viewed from Recreational Cycle Track on On Muk Street
- Figure 3 View B: Viewed from Hong Kong Baptist University and International Christian School
- Figure 4 View C: Viewed from Shek Mun Estate Phase 1 and Phase 2
- Figure 5 View D: Viewed from recreational Cycling Arena on Siu Lek Yuen Road Playground

Food and Health Bureau

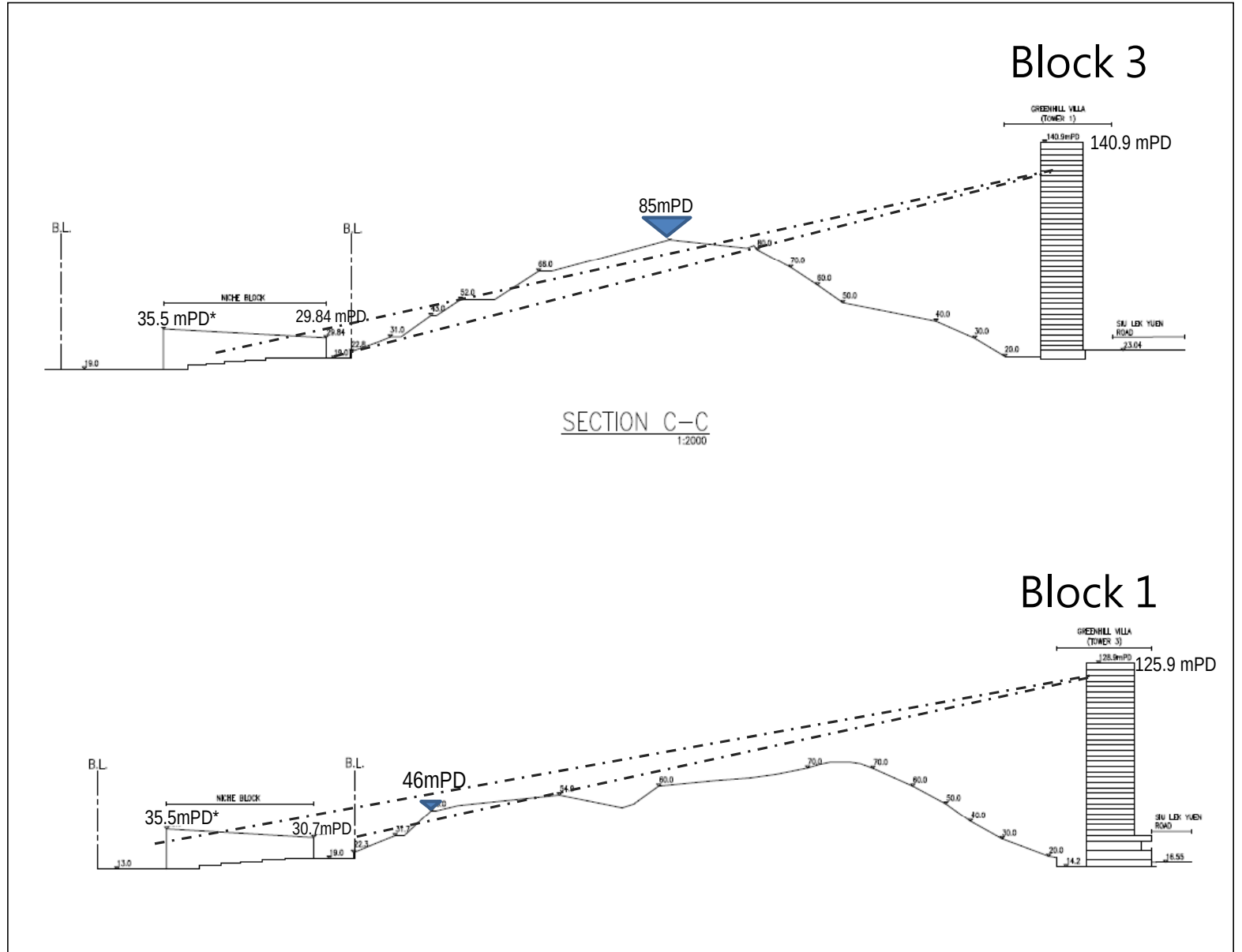
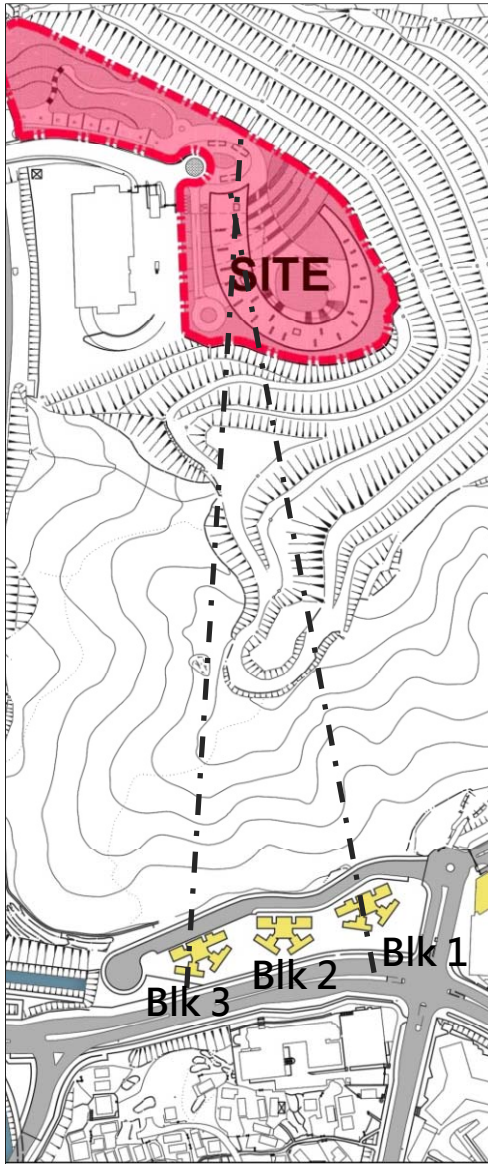
Food and Environmental Hygiene Department

December 2016



Plan 1 – Site Location Plan

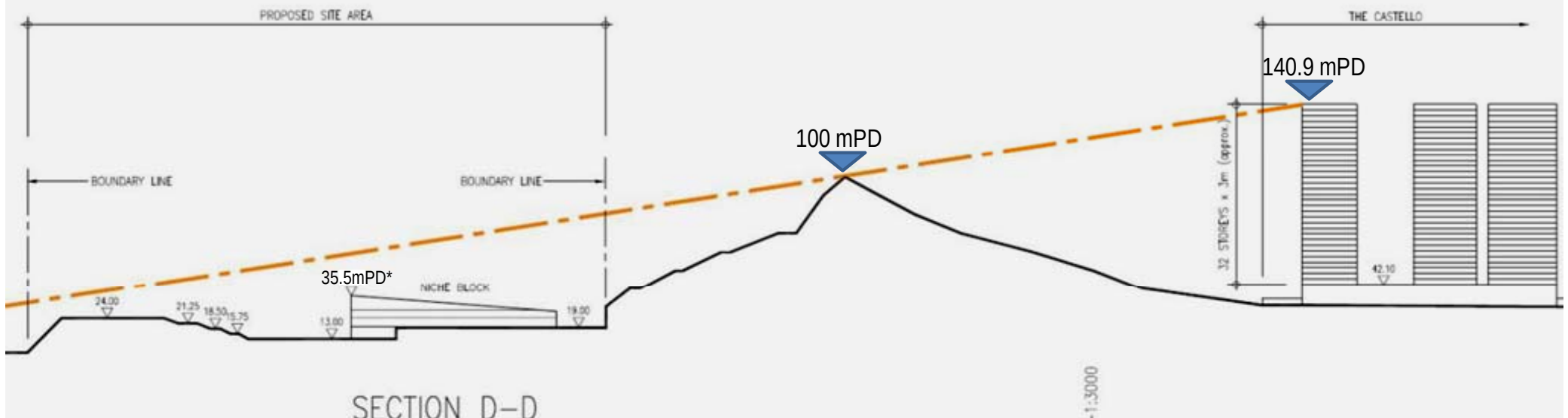
View from Greenhill Villa to the Site



View from Castello to the Site

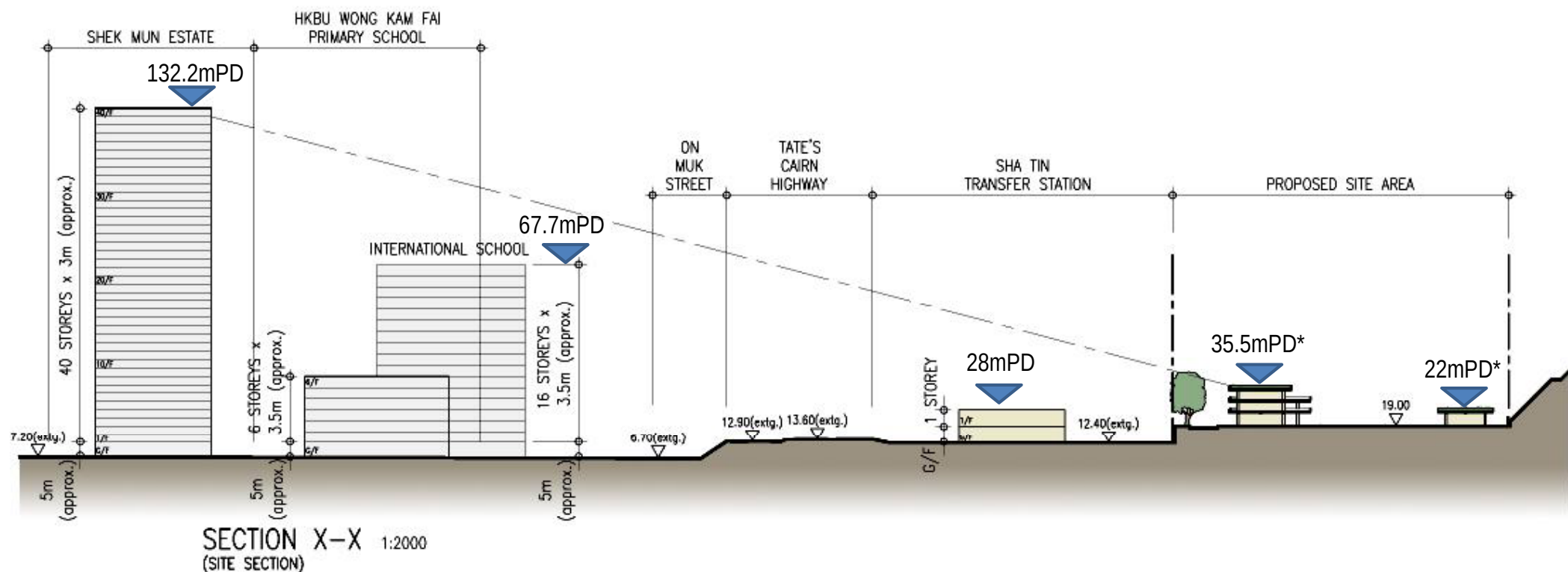


KEY PLAN



Note: * The building height of 35.5mPD is for indicative only at this preliminary design stage, subject to changes in detailed architectural design at the subsequent stage

View from Kin Shek House, Shek Mun Estate



Note: * The building height of 35.5mPD and 22mPD is for indicative only at this preliminary design stage, subject to changes in detailed architectural design at the subsequent stage

Plan 5 – Section Plan from Kin Shek House



Plan 6 – Bird's-eye View from Kin Shek House

PWP No: 24NB Provision of Columbarium at On Hing Lane, Shek Mun, Shatin

Figure 1- Viewpoints from popular pedestrian nodes accessible by the public

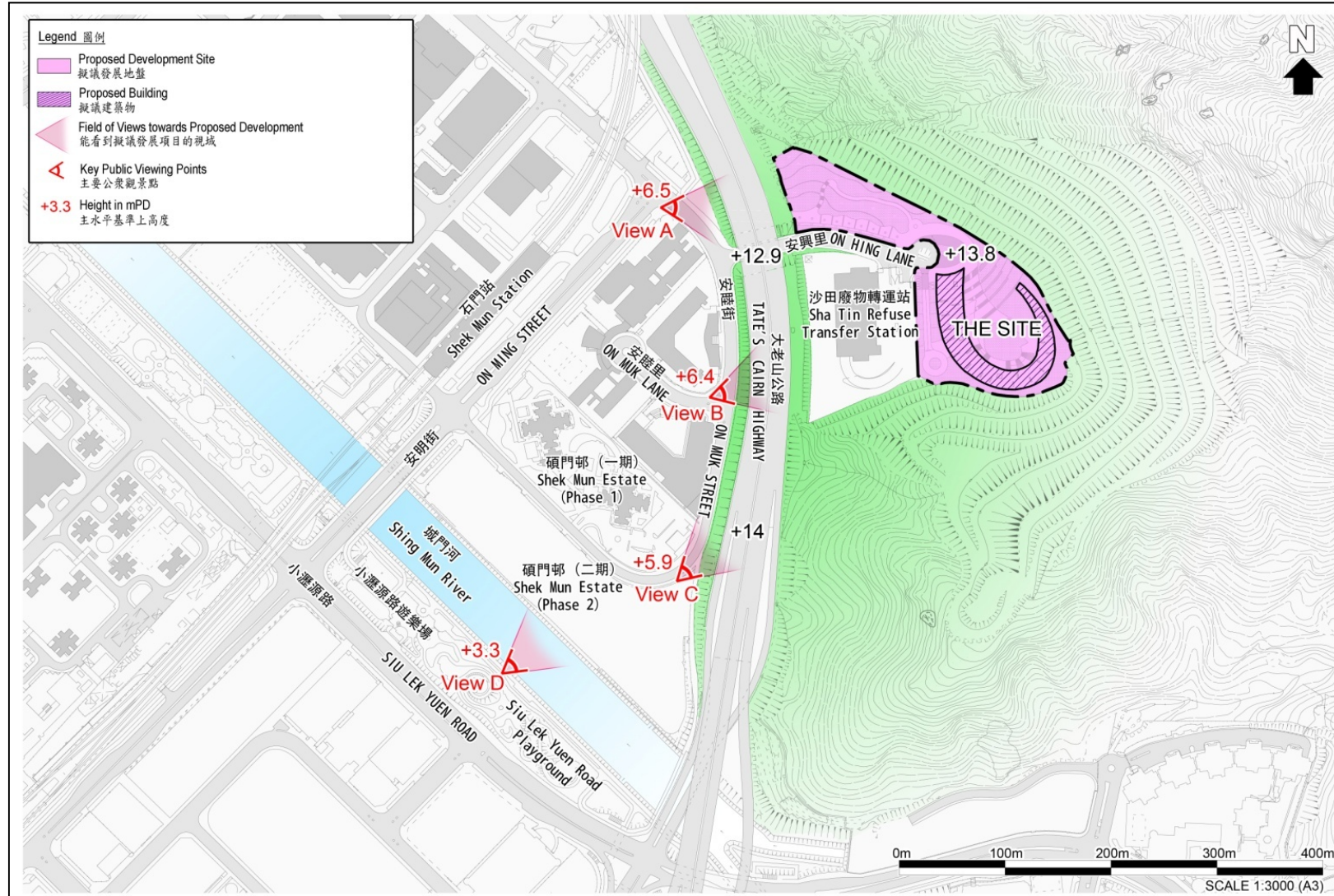


Figure 2

View A: Viewed from Recreational Cycle Track on On Muk Street



Without project



With project

The proposed columbarium and garden of remembrance development is blocked by the elevated Tate's Cairn Highway and is obscured by tall trees and dense vegetation in the foreground.

Figure 3

View B: Viewed from Hong Kong Baptist University and International Christian School



Without project



With project

The proposed columbarium and garden of remembrance development is totally concealed by the tall trees and dense vegetation along the western side of the elevated Tate's Cairn Highway.

Figure 4

View C: Viewed from Shek Mun Estate Phase 1 and Phase 2



Without project



With project

The proposed columbarium and garden of remembrance development is screened off by the tall trees and slope with dense vegetation along the western side of the elevated Tate's Cairn Highway.

Figure 5

View D: Viewed from recreational Cycling Arena on Siu Lek Yuen Road Playground



Without project



With project

The proposed columbarium and Garden of Remembrance development is visually obstructed by the Kin Shek House and Mei Shek House of Shek Mun Estate Phase 1 and will be fully blocked after the completion of Shek Mun Estate Phase 2.

**Item D - Brief Summary of Traffic Impact Assessment for
Public Housing Development at On Muk Street, Shek Mun, Sha Tin**

Background

The site is zoned “Open Space” (“O”) on the current Sha Tin Outline Zoning Plan (OZP) No. S/ST/32. The site is identified for public housing development which requires rezoning on the OZP. It is proposed to rezone the site from “O” to “Residential (Group A)6” (“R(A)6”) for the proposed public housing development with a total of about 553 flats for Phase 1 and 901 flats for Phase 2 at On Muk Street, Shek Mun, Shatin.

The subject is located at the west of Shek Mun MTR Station with a gross site area of about 0.43ha for Phase 1 and 0.70ha for Phase 2. As the Phase 2 site is currently occupied by a temporary football training centre, public housing development in this site is subject to reprovisioning by the Government. Nevertheless, for assessment purpose, the whole public housing development is assumed to be completed by 2024.

To ascertain the feasibility of the proposed public housing development, Housing Department (HD) has carried out a preliminary Traffic Impact Assessment and the results are summarized as follows:

Traffic Review

The results of junction and link capacities based on 2015 traffic counts indicate that all assessed junctions and links are currently operating satisfactorily with spare capacity during both morning and evening peaks.

Assessment of future traffic condition based on 2-phase development scenario in Years 2024 and 2029 were undertaken to demonstrate the traffic conditions in the study area after completion of the public housing development, together with a sensitivity test with phase 1 housing development only in years 2021 and 2026. All assessed junctions and footpaths would be operating satisfactorily with spare capacity during both morning and evening peaks. The traffic generated by the 1- phase development scenario is deemed to be less than the whole housing development.

The parking and servicing facilities for the proposed public housing development were generally provided in accordance with the Interim Parking Standards for New Home Ownership Scheme Projects as agreed among Transport Department and HD.

Provision of public transport and pedestrian crossing facilities were investigated. The Site is well-served by different modes of public transport services in close proximity and well-connected to adjacent developments by existing footpaths and pedestrian crossing facilities.

Parking and loading/ unloading surveys for good vehicles have also been carried out. The results revealed that there are sufficient capacities at the Shek Mun area and the traffic condition is manageable.

Based on the traffic analyses, the proposed public housing development will not generate adverse traffic impact on the surrounding road network. The proposed development is acceptable from traffic point of view. Improvement measures for the identified junctions operating with marginal capacity have also been proposed for the relevant government departments' consideration and implementation.

The TIA would be reviewed at the time when the Government proceeds rezoning of Phase 2 site upon reprovisioning of the temporary football training centre.

Housing Department
December 2016

**Item D - Visual Appraisal for the Proposed Public Housing Development
at On Muk Street, Shek Mun, Sha Tin Area 11**

Purpose

1. This Visual Appraisal (VA) is to examine the possible visual effect of the proposed public housing development (proposed development) so as to facilitate the rezoning of the Site from “Open Space” (“O”) to “Residential (Group A) 6” (“R(A)6”).

The Site

2. The Site, with an area of about 4,330 sq.m., is situated at the southwestern fringe of the Shek Mun Business Area in Sha Tin Area 11 and is zoned “O” on the approved Sha Tin Outline Zoning Plan (OZP) No. S/ST/32. It is a piece of government land which is partly vacant and partly occupied by a road research laboratory (Hong Kong Road Research Laboratory) under Short Term Tenancy.

3. To the immediate southwest of the Site, a 20m wide promenade along the Siu Lek Yuen Nullah has been recommended by Planning Department.

The Proposed Development

4. The Hong Kong Housing Authority proposes to develop a public housing development with an overall maximum gross floor area of 26,240 m² and a maximum building height of 110mPD. The proposed development will deliver about 560 flats for a design population of about 1,700 persons, subject to detailed design.

5. To strive for a better quality living environment, the proposed development adopts a semi-basement carpark to not only minimise the building height but also allow more greening opportunity within the Site. The proposed development at a maximum building height of 110mPD coheres with the building height profile of the adjacent Shek Mun Estate Phase 2 (about 110-140mPD) and respects the building heights of City One Shatin (about 82-108mPD) located to the southwest of the Site across the Siu Lek Yuen Nullah. It also coheres with the adjacent industrial-office buildings, i.e. Ever Gain Building (No. 3) (about 93mPD) and Ever Gain Centre (about 112mPD).

Visual Appraisal

6. The following five viewpoints viewing from popular pedestrian nodes accessible by the public have been identified (**Figure 1**).

- (a) On Muk Street near MTR Shek Mun Station Exit A at Street Level;
- (b) Siu Lek Yuen Road Playground near the MTR Ma On Shan Line Railway Track;
- (c) On Muk Street Garden;
- (d) Western Bank of Shing Mun River Channel near Sha Tin Rowing Centre; and
- (e) Intersection of Siu Lek Yuen Road and Ngan Shing Street, near City One Shatin.

Five photomontages (**Figures 2 to 6**) are prepared to illustrate the possible visual impact of the proposed development at the selected viewpoints.

Viewpoint 1 – On Muk Street near MTR Shek Mun Station Exit A at Street Level

7. This viewpoint is located to the southeast of the Site and is close to the major transport hub in Shek Mun with a relatively high pedestrian flow serving a mix of residential, commercial and industrial developments with government facilities in the area. The visual sensitivity of this viewpoint is considerably high.

8. The photomontage (**Figure 2**) shows that, while this view is predominated by a parade of industrial-office buildings, the proposed development partially reduces the skyview and obstructs a portion of a residential development namely The Palazzo (about 151-157mPD). Nevertheless, the proposed development with truncated building design offers different building surfaces to enhance the overall visual effect. In view that there is no important visual element along the sightline, the proposed development is not visually incompatible with the surrounding areas.

Viewpoint 2 – Siu Lek Yuen Road Playground near the MTR Ma On Shan Line Railway Track

9. This viewpoint is taken at Siu Lek Yuen Road Playground, which is a large piece of public open space opposite to the Site across the nullah for public enjoyment. The visual sensitivity of this viewpoint is considerably high.

10. The photomontage (**Figure 3**) shows that the proposed development partially reduces the skyview and maintains majority of the industrial-office building façades along the riverside. With the building setback of 20m from the exterior of seawall for provision of a promenade by other relevant department(s), the proposed development with the truncated building design is coherent with the height profile of the adjacent industrial-office buildings, such as Ever Gain Centre (about 112mPD) and Kings Wing Plaza 1 (about 98mPD). The proposed development is hence considered visually acceptable from this viewpoint.

Viewpoint 3 – On Muk Street Garden

11. This viewpoint is taken at On Muk Street Garden which is the public open space adjoining to the proposed development and is easily accessible by the workers from the surrounding industrial-office buildings. The visual sensitivity of this viewpoint is considerably high.

12. The photomontage (**Figure 4**) shows that the proposed development insignificantly reduces the visual openness and visually echoes with Shek Mun Estate Phase 2 in the southeast from this viewpoint. The development setting back for a promenade minimises the visual impact on the surrounding area and allows a wide visual penetration along Siu Lek Yuen Nullah in southeast-northwest direction while screening off a portion of the industrial-office building façades at the back. The proposed development is considered not visually incompatible with the surrounding areas.

Viewpoint 4 – Western Bank of Shing Mun River Channel near Sha Tin Rowing Centre

13. This viewpoint shows a panoramic view taken near Sha Tin Rowing Centre on the western bank of the Shing Mun River Channel with frequent flow by pedestrians and cyclists. The visual sensitivity of this viewpoint is considerably high.

14. The photomontage (**Figure 5**) shows that the proposed development is well integrated to create a harmonious skyline along the eastern bank of the Shing Mun River Channel. The proposed development well matches with the general townscape of the surrounding areas and hence it is considered visually acceptable.

Viewpoint 5 – Intersection of Siu Lek Yuen Road and Ngan Shing Street, near City One Shatin

15. This view is taken at the intersection of Siu Lek Yuen Road and Ngan Shing Street with high pedestrian flow mainly generated from the City One Shatin which is a large residential development. The visual sensitivity of this viewpoint is considerably high.

16. The photomontage (**Figure 6**) shows that the proposed development screens off a portion of Even Gain Building (No. 3) from this viewpoint and partially reduces the skyview. Nevertheless, it coheres with the height profile of the adjacent industrial-office buildings, including Ever Gain Building (No. 3) (about 93mPD) and Ever Gain Centre (about 112mPD). The proposed development is considered visually acceptable.

Conclusion

17. In spite of the limited site area and design flexibility, some design measures, such as building setback, semi-basement carpark and truncated building design, have been incorporated to minimise the visual impact of the proposed development.

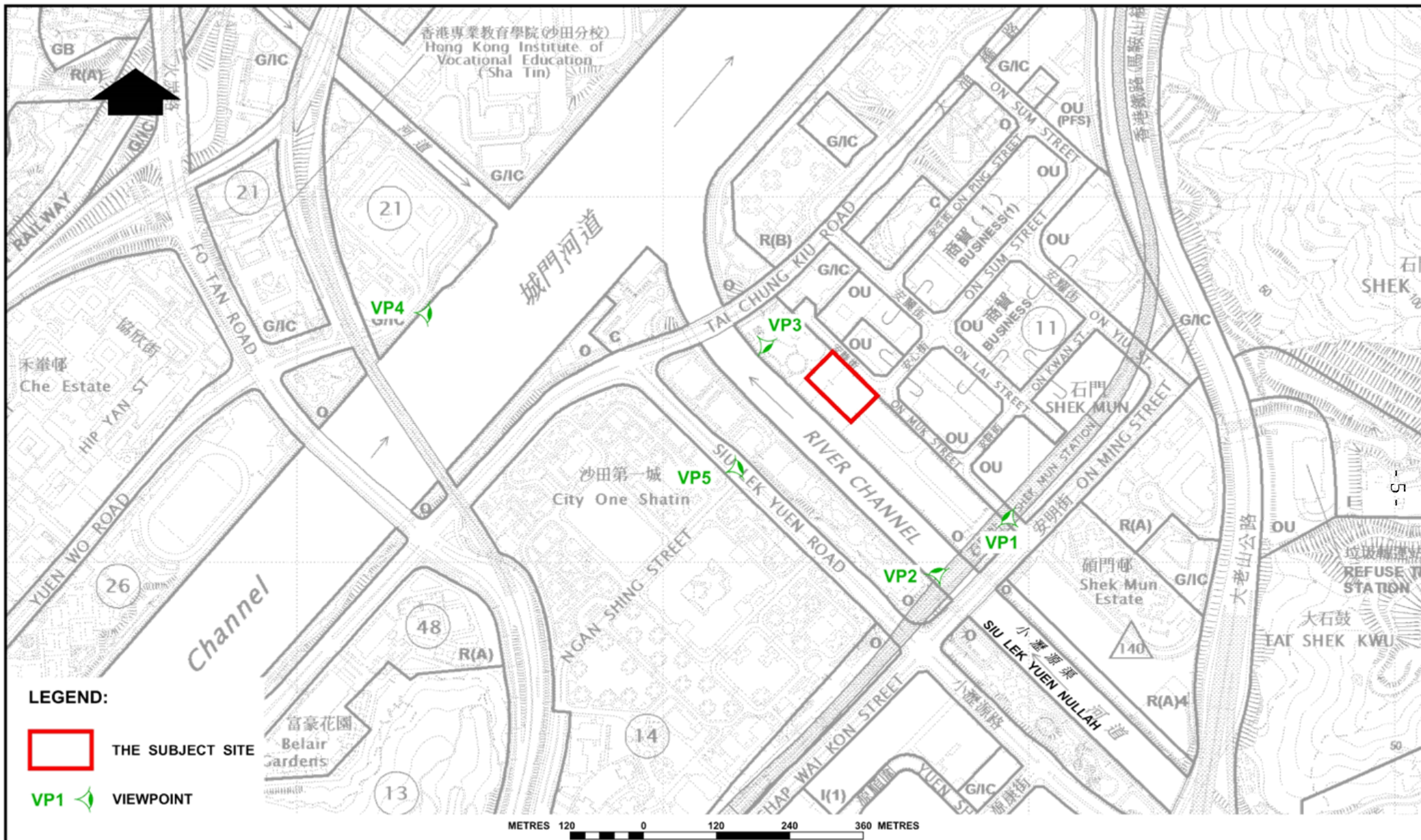
18. Based on the above, the proposed development will not induce substantial visual impact on the surrounding area. Other measures such as greening at grade and over the carpark deck and façade treatment with harmonious colour scheme or pattern, etc will also be considered at the later design stage to further enhance the visual interest.

Attachments

- | | |
|----------|---|
| Figure 1 | Location of the Five Proposed Viewpoints |
| Figure 2 | Viewpoint 1 – Photomontage viewing from On Muk Street near MTR Shek Mun Station Exit A at Street Level |
| Figure 3 | Viewpoint 2 – Photomontage viewing from Siu Lek Yuen Road Playground near the MTR Ma On Shan Line Railway Track |
| Figure 4 | Viewpoint 3 – Photomontage viewing from On Muk Street Garden |
| Figure 5 | Viewpoint 4 – Photomontage viewing from the Western Bank of Shing Mun River Channel near Sha Tin Rowing Centre |
| Figure 6 | Viewpoint 5 – Photomontage viewing from the intersection of Siu Lek Yuen Road and Ngan Shing Street, near City One Shatin |

Housing Department

November 2016



ON MUK STREET, SHEK MUN LOCATION OF FOUR PROPOSED VIEWPOINTS



HOUSING DEPARTMENT
PLANNING SECTION

Figure 1

DATE:
27. 10. 2016

Figure 2: Viewpoint 1 – Photomontage viewing from On Muk Street near MTR Shek Mun Station Exit A at Street Level

Existing Condition without Proposed Development



Photomontage with Proposed Development

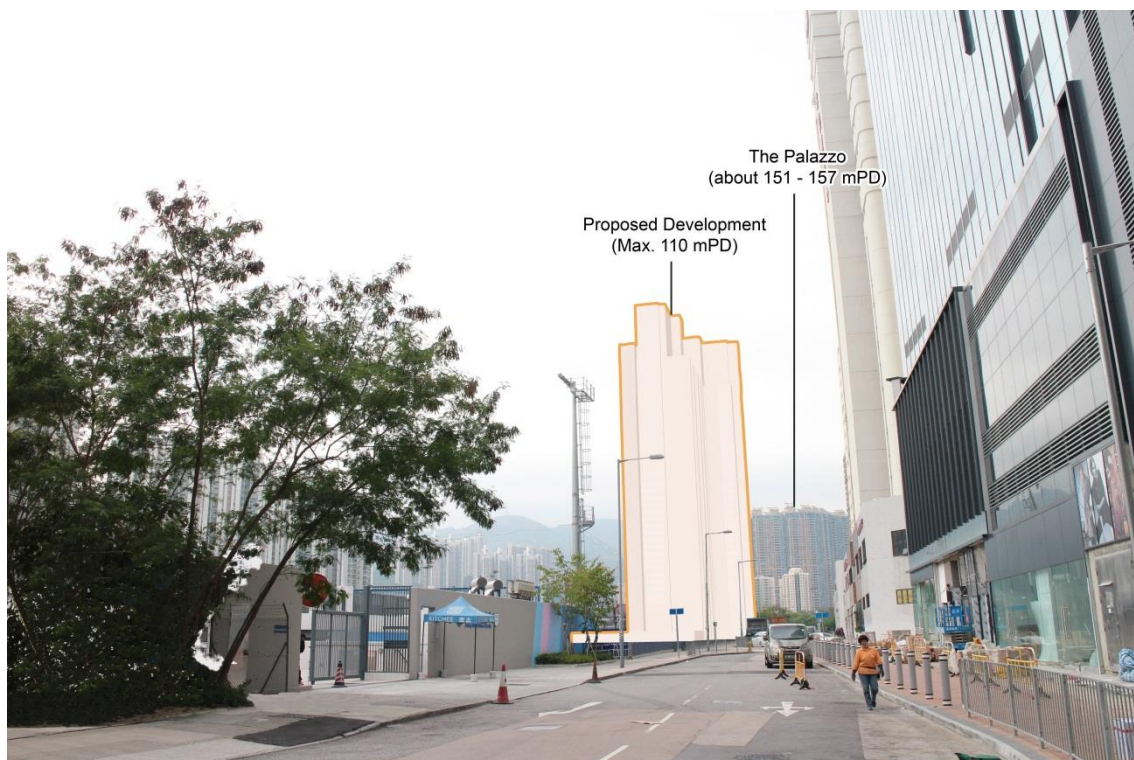


Figure 3: Viewpoint 2 – Photomontage viewing from Siu Lek Yuen Road Playground near the MTR Ma On Shan Line Railway Track

Existing Condition without Proposed Development



Photomontage with Proposed Development



Figure 4: Viewpoint 3 – Photomontage viewing from On Muk Street Garden

Existing Condition without Proposed Development



Photomontage with Proposed Development



Figure 5: Viewpoint 4 – Photomontage viewing from the Western Bank of Shing Mun River Channel near Sha Tin Rowing Centre

Existing Condition without Proposed Development



Photomontage with Proposed Development

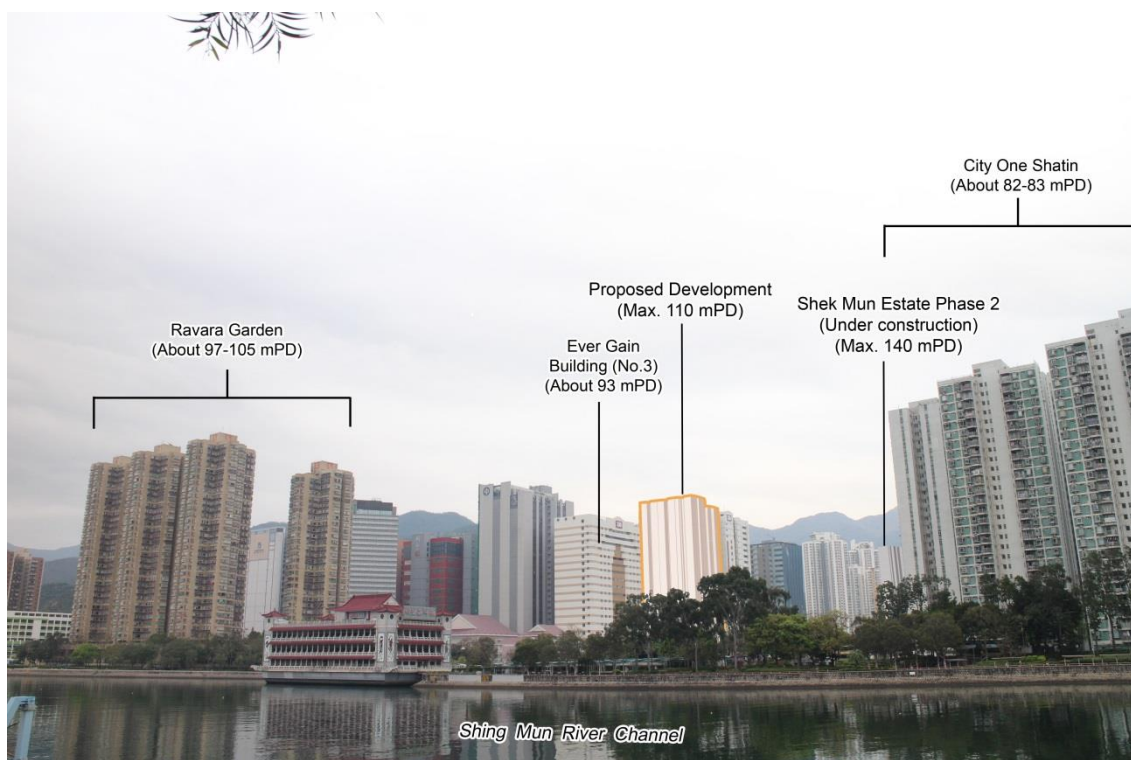


Figure 6: Viewpoint 5 – Photomontage viewing from the intersection of Siu Lek Yuen Road and Ngan Shing Street, near City One Shatin

Existing Condition without Proposed Development



Photomontage with Proposed Development



CONSULTANCY STUDY FOR AIR VENTILATION ASSESSMENT SERVICES

**CAT. A1 – TERM CONSULTANCY FOR EXPERT EVALUATION ON AIR
VENTILATION ASSESSMENT (PLNQ A1-4/AVA 2015)**

**AIR VENTILATION ASSESSMENT EXPERT
EVALUATION REPORT**

FOR

**PROPOSED PUBLIC HOUSING DEVELOPMENT
AT ON MUK STREET, SHEK MUN**

(PLNQ A1-4/AVA 2015)

16 December 2016

ISSUE 1

Submitted to:
Planning Department

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EXECUTIVE SUMMARY

BeeXergy Consulting Limited was commissioned by the Planning Department of Hong Kong Special Administrative Region Government to undertake an Air Ventilation Assessment (AVA) – Expert Evaluation (EE) for the proposed public housing development at On Muk Street, Shek Mun (the Development). Qualitative assessment of the wind environment of the Development at On Muk Street, Shek Mun was conducted. The Development consists of three domestic blocks and a GIC building under Proposed Scheme and one domestic block with carpark under Revised Scheme. According to the analysis, the annual and summer prevailing wind were studied. The findings of the EE study are summarized in below:

Annual Wind Condition

- NNE wind would mainly flow along On Sum Street and On Kwan Street. With the provision of three NBAs, setback from north-western site boundary and adoption of podium-free design under the Proposed Scheme, it is expected the development would not induce significant disturbance on the NNE wind flow from On Sum Street and On Kwan Street to the open space at Siu Lek Yuen Road. For the Revised Scheme, NNE wind is expected to travel along On Sum Street and skim over the 1-storey carpark. No significant adverse impact has been identified for the Revised Scheme.
- E and ESE winds mainly flow along On Muk Street and Shing Mun Nullah. As the Proposed Scheme and revised scheme is in alignment with the adjacent air paths along On Muk Street and Shing Mun Nullah, thus it is expected the Proposed Scheme and Revised Scheme would not likely disturb the air flow along these air paths. Setback from north-western site boundary should be incorporated to minimize the wind shadow imposed on On Muk Street Garden induced by the proposed development. Similar observation is valid for the Revised Scheme.

Summer Wind Condition

- Under E wind, similar to annual easterly wind condition, the incoming wind mainly flow along On Muk Street and Shing Mun Nullah. As the Proposed Scheme and Revised Scheme is in alignment with the adjacent air paths along On Muk Street and Shing Mun Nullah, thus it is expected the Proposed Scheme and Revised Scheme would not likely disturb the air flow along these air paths.
- Under S, SSW and SW wind, the wind mainly flow along Ngan Shing Street and Chap Wai Kon Street / On Ming Street. As the NBAs in Proposed Scheme are in alignment with On Sum Street and On Kwan Street, it is expected that the Proposed Scheme would not induce significant disturbance to the air flow except a section of On Muk Street close to the development. For the Revised Scheme, due to its small development footprint, it is expected that its impact on wind flow is minimal.

Proposed Scheme

For the Proposed Scheme, in addition to the NBAs, setback and podium-free design, it is recommended that a ground floor level empty bay could further facilitate wind penetration across the development in enhancing the pedestrian wind environment of the surrounding, particularly for On Muk Street under summer SW quadrant wind. As for the school site, it is recommended to align the building mass with the wind corridor of On Kwan Street to allow more effective wind penetration under SW quadrant wind.

It is recommended that a quantitative AVA should be conducted at the detailed design stage for scheme optimization including the effectiveness of the suggested measures of ground floor empty bays and revised disposition of the primary school.

Revised Scheme

For the Revised Scheme, with the provision of building setback and building height of the carpark maintained at 1-storey, no significant impact has been identified due to the relatively small development scale.

If the good design measures (i.e. 13m setback from the north-western site boundary and building height restriction of 1-storey carpark) cannot be provided in the future development, further quantitative assessments should be conducted to demonstrate that the performance of any future development would be no worse off than the scenario with these measures.

1. INTRODUCTION

1.1. PROJECT BACKGROUND

BeeXergy Consulting Limited (BXG) was commissioned by the Planning Department (PlanD) of Hong Kong Special Administrative Region Government to undertake an Air Ventilation Assessment (AVA) – Expert Evaluation (EE) for the proposed public housing development at On Muk Street, Shek Mun (the Development). In response to the public concerns, rezoning of the land occupied by the football training centre (i.e. Phase 2 and primary school) is postponed until the relocation arrangement for the football training centre is settled. In view of the above, Housing Department (HD) has prepared a Proposed Scheme (i.e. Phases 1, 2 and primary school) and Revised Scheme (i.e. Phase 1 only) for air ventilation assessment.

Air Ventilation Assessment Study for Fo Tan and Siu Lek Yuen Industrial Areas (December 2015) and Shek Mun Land Use Plan B16 are also referenced in current EE Report

1.2. OBJECTIVE

The objective of this study is to evaluate the wind performance of the Development using the methodology of Air Ventilation Assessment, based on the “Housing Planning and Lands Bureau – Technical Circular No. 1/06, Environment, Transport and Works Bureau – Technical Circular No. 1/06” issued on 19th July 2006 (the Technical Circular) and “*Technical Guide for Air Ventilation Assessment for Development in Hong Kong – Annex A*” (the Technical Guide). This report presents the findings for the study of Stage 1 – Expert Evaluation.

1.3. STUDY TASKS

The major task of this study is to carry out an Expert Evaluation on the characteristics of the site wind availability data of the development area and assessment of the wind performance under existing development situation and the proposed building design option in a qualitative way. The expert evaluation will cover the following tasks:

- Review the existing wind environment of the Development Site and the surrounding
- Assess qualitatively the air ventilation impacts of the proposed housing developments on the surrounding areas
- Identify major breezeway(s), air-path(s), problematic area(s)
- Comment on the localized wind effects of the proposed developments within the surrounding area
- Identify if any wind stagnation and wind amplification causing uncomfortable and unsafe wind environment
- Recommend the improvement and mitigation measures
- Recommend if any further study as may be necessary

2. SITE CHARACTERISTICS

The Development Site at about 1.52 ha in area is currently occupied by Jockey Club Kitchee Centre with open pitches and some low-rise structures (about 7.2mPD to 7.6mPD). It is located at On Muk Street at junctions of On Sum Street and On Kwan Street as shown in Figure 1. It is situated to the southwest of Shek Mun Business Area (SMBA) next to the river channel. The subject Area is a flat built-up urban area in the vicinity of Shing Mun Nullah reclamation and gradually slope up towards the north-east with Turret Hill (Nui Po Shan) of approximately 399mPD in height. Yuen Chau Kok, a hill of approximately 70mPD in height is situated to the south-west of subject Area.

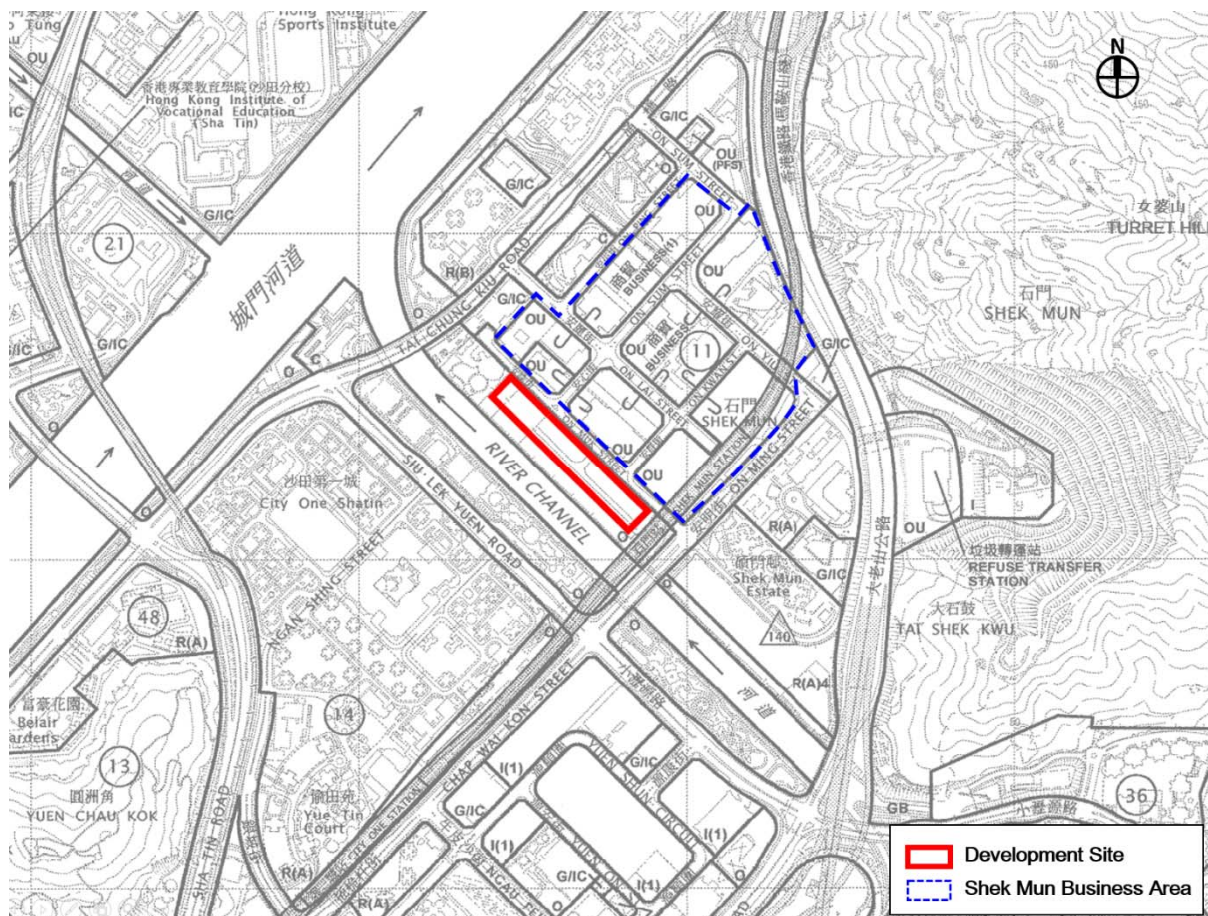


Figure 1 Shek Mun Area(Source: PlanD)

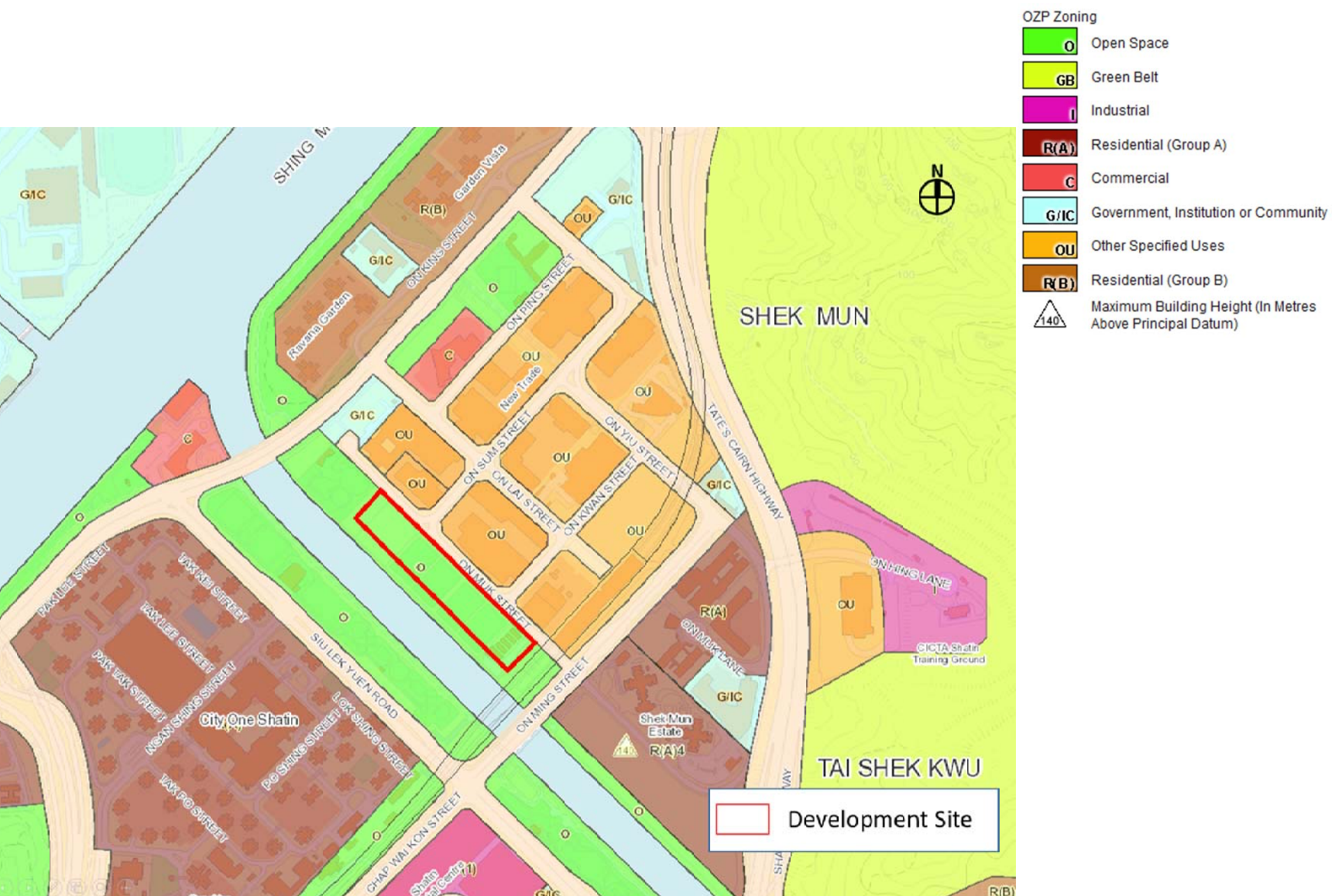


Figure 2 Land Use Plan of the Development Site and its Surrounding based on the approved Sha Tin Outline Zoning Plan No. S/S/ST/32 (Source: Town Planning Board)



1 Garden Vista (86.8mPD)	8 Topsail Plaza & Delta House (108.8mPD)	15 HKBU College of International Education (81mPD)	22 Shatin Industrial Building Block B (39.5mPD)
2 Ravana Garden (104.9mPD)	9 Metropole Square, Corporation Park & HSBC Shek Mun (109.9mPD)	16 HKBU Affiliated School Wong Kam Fai Primary School Proposed School Annex (34.3mPD)	23 Chiaphua Centre & Siu Lek Yuen Telephone Exchange (49.7mPD)
3 Courtyard by Marriott Hong Kong Sha Tin (104.5mPD)	10 New Commerce Centre, Technology Park & Ever Gain Centre (111.8mPD)	17 Shek Mun Estate (120mPD)	24 SHK Proposed Hotel at 20-22 Siu Lek Yuen Road (109.3mPD)
4 Heung Yee Kuk N.T. (37.1mPD)	11 SHK Proposed Commercial Building on STTL 617 (123.6mPD)	18 Shek Mun Estate Ph. 2 WIP (110-140mPD)	25 KMB Bus Depot (20.8mPD)
5 Grandtech Centre (112mPD)	12 1 On Kwan Street (123.5mPD)	19 City One Shatin (107.5mPD)	
6 New Trade Plaza & Li Fung Centre (94.5mPD)	13 Kings Wing Plaza 1 (97.8mPD)	20 Sunshine Grove (118.1mPD)	
7 CLP Power Hong Kong Limited-Shatin Centre & Ever Gain Building No.3 (122.4mPD)	14 HKBU Affiliated Wong Kam Fai Secondary and Primary School & International Christian School (23.4-39.3mPD)	21 Yue Tin Court (105.7mPD)	

Figure 3 Major Roads and Developments around the Development Site (Source: Geoinfo Map)

High-rise Shek Mun business clusters (“5” – “13” in Figure 3) including two planned non-residential developments (“11” & “12” in Figure 3) are at the north-east of the Development Site. To the far eastern of the Development Site is the school site (“14” in Figure 3) including low-rise HKBU Affiliated School Wong Kam Fai Secondary and Primary School, and International Christian School while HKBU College of International Education is a high-rise building (“15” in Figure 3). To the north of the Development Site is a site zoned “G/IC” for the Heung Yee Kuk New Territories (“4” in Figure 3). The high-rise hotel, Courtyard by Marriott Hong Kong Sha Tin, is located further north (“3” in Figure 3)

Major high-rise residential developments in the vicinity of the Development Site include Shek Mun Estate (“17” in Figure 3) and Shek Mun Estate Phase 2 (under construction) (“18” in Figure 3) to the south-east, City One Shatin (“19” in Figure 3), Sunshine Grove (“20” in Figure 3) and Yue Tin Court (“21” in Figure 3) to the south-west, and Ravana Garden (“2” in Figure 3) to the north-west. These developments are densely built with high-rise building blocks.

To the south of the Development Site are mid-rise industrial and GIC buildings (“22” and “23” in Figure 3). A planned development at Yuen Hong Street (“24” in Figure 3) will be a high-rise hotel building. The low-rise KMB Bus Depot is located further south (“25” in Figure 3).

3. SITE WIND AVAILABILITY

To investigate the wind performance of the Development site, the characteristic of the natural wind availability of the site is essential. Site wind availability data presented in the wind rose could be used to assess the wind characteristics in terms of the magnitude and frequency of approaching wind from different wind directions. There are three sources of site wind data available for this Study, including wind tunnel test, simulated RAMS and the nearest Hong Kong Observatory (HKO) Weather Station – Shatin Weather Station.

3.1. WIND TUNNEL TEST

A wind tunnel experiment was previously conducted for the *Experimental Site Wind Availability Study for Sha Tin, Hong Kong* by the CLP Power Wind/Wave Tunnel Facility (WWTF) (August 2009) at The Hong Kong University of Science and Technology. The study area of the wind tunnel test was centred at City One Plaza and has a radius of approximately 500m, which covers the Development Site as shown in Figure 4. Wind roses at 200mPD are adopted in this study as it gives a better representation on the topographical effect in proximity while compared with wind roses from higher levels. The 200mPD wind roses under annual and summer conditions are shown in Figure 5 and Figure 6 respectively representing the localized wind conditions.

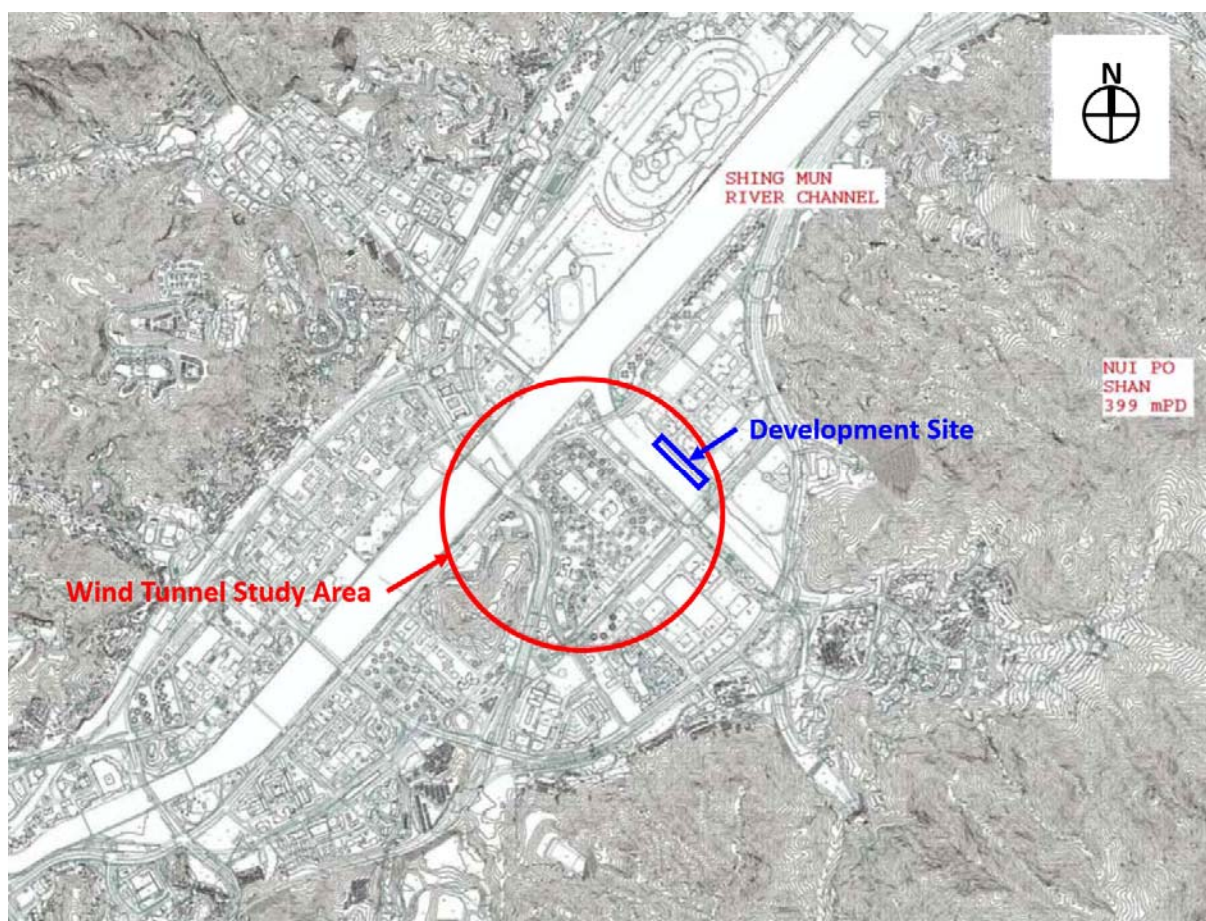


Figure 4 Location of the Wind Tunnel Test for Shatin Study Area
(Source: http://www.pland.gov.hk/pland_en/info_serv/site_wind/index.html)

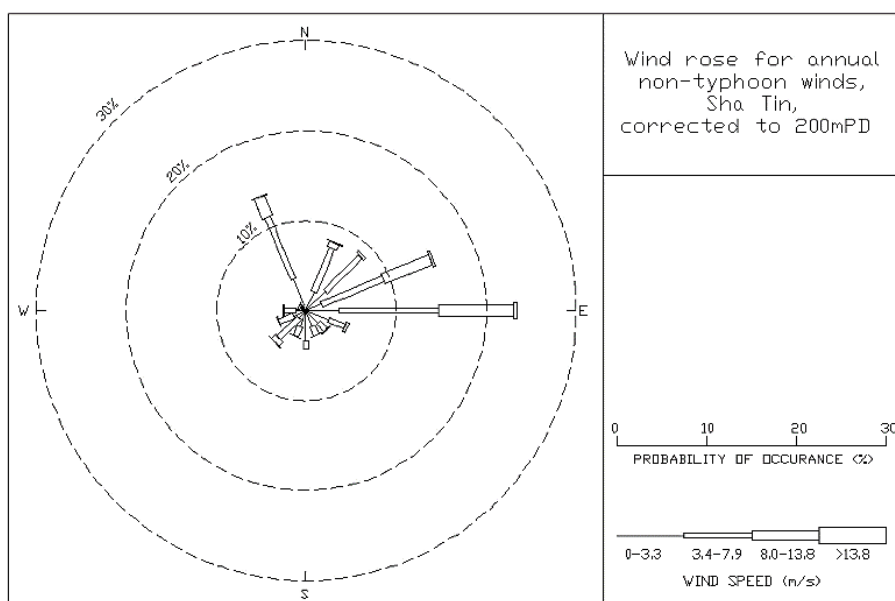


Figure 5 Wind Rose for Shatin Study Area from Wind Tunnel Test under Annual Wind Condition at 200m

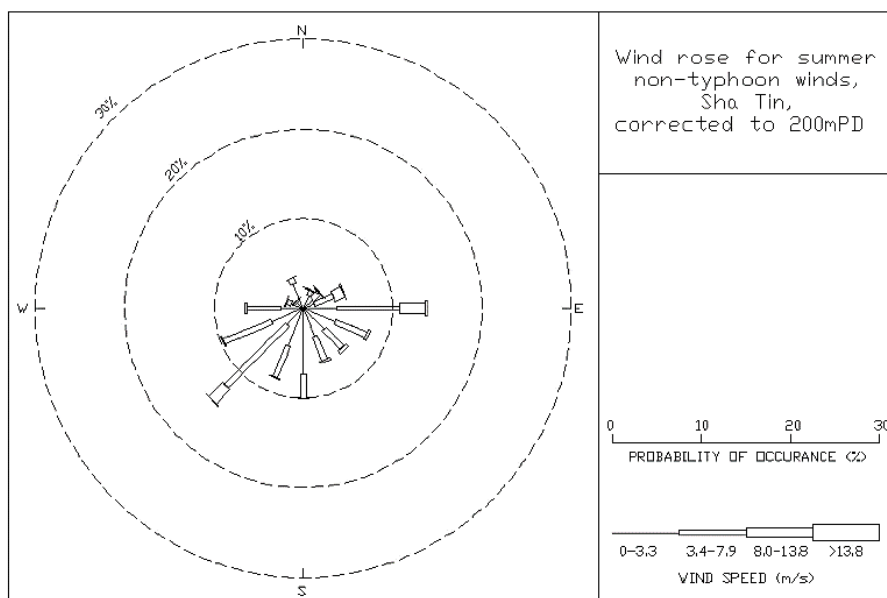


Figure 6 Wind Rose for the Shatin Study Area from Wind Tunnel Test under Summer Wind Condition at 200m

Table 1 Prevailing Wind Frequency by Wind Tunnel Test

Prevailing Wind	Annual	Summer
Wind Direction	ENE, E, NNW	E, S, SW, WSW

According to the wind data from the wind tunnel test, ENE, E and NNW winds are identified as the annual prevailing wind directions while E, S, SW and WSW winds are identified as the summer prevailing wind directions.

3.2. RAMS WIND DATA

As stipulated in the Technical Guide, the site wind availability would be presented by using appropriate mathematical models. PlanD has set up a set of wind availability data of the Territory for AVA study, i.e. RAMS simulation, which could be downloaded at PlanD's Website¹.

The wind availability data at 200mPD obtained from the grid of (X087, Y058) of the RAMS simulation can better represent the localized wind condition taking into account topography and morphology is used for this Expert Evaluation, as shown in Figure 7.

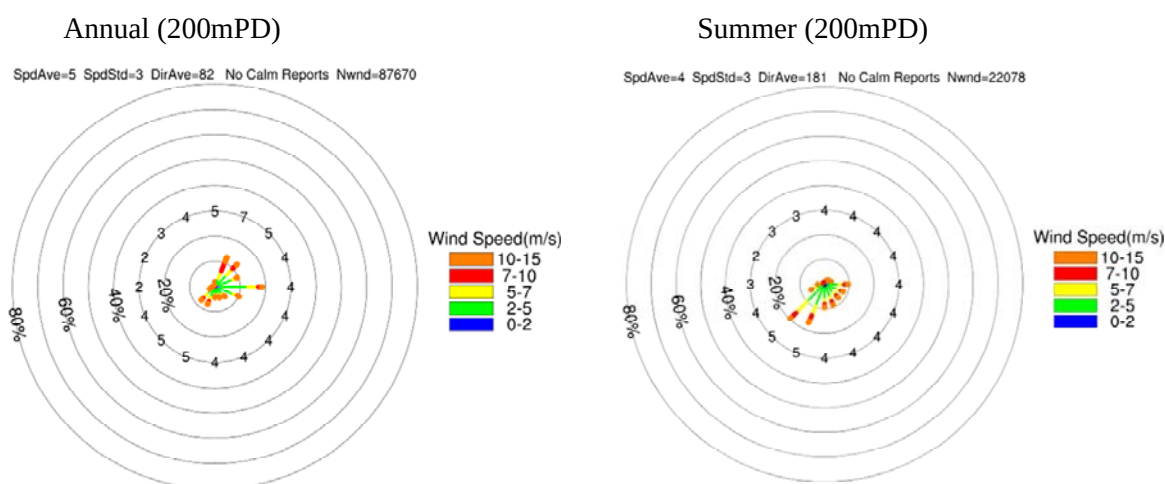


Figure 7 Wind Roses of Grid X087, Y058 by RAMS Wind Data

Table 2 Prevailing Wind Frequency by RAMS Wind Data

Prevailing Wind	Annual			Summer			
Wind Direction	NNE	E	ESE	E	S	SSW	SW
Wind Frequency	12.4%	18.6%	10.3%	9.5%	9.4%	17.0%	19.7%

According to the RAMS wind data, NNE, E and ESE winds contribute to 12.4%, 18.6% and 10.3% of the annual wind frequency respectively while the E, S, SSW and SW winds contribute to 9.5%, 9.4%, 17.0% and 19.7% of the summer wind frequency respectively. Hence, NNE, E and ESE winds are identified as the annual prevailing wind directions while E, S, SSW and SW winds are identified as the summer prevailing wind directions.

¹ http://www.pland.gov.hk/pland_en/info_serv/site_wind/site_wind/index.html

3.3. HONG KONG OBSERVATORY

The prevailing wind direction for each month measured at the nearest weather station - Shatin Weather Station from the Hong Kong Observatory² as shown in Figure 8 is tabulated in Table 3. The E wind is the annual prevailing wind direction while the SW wind is the summer prevailing wind direction.

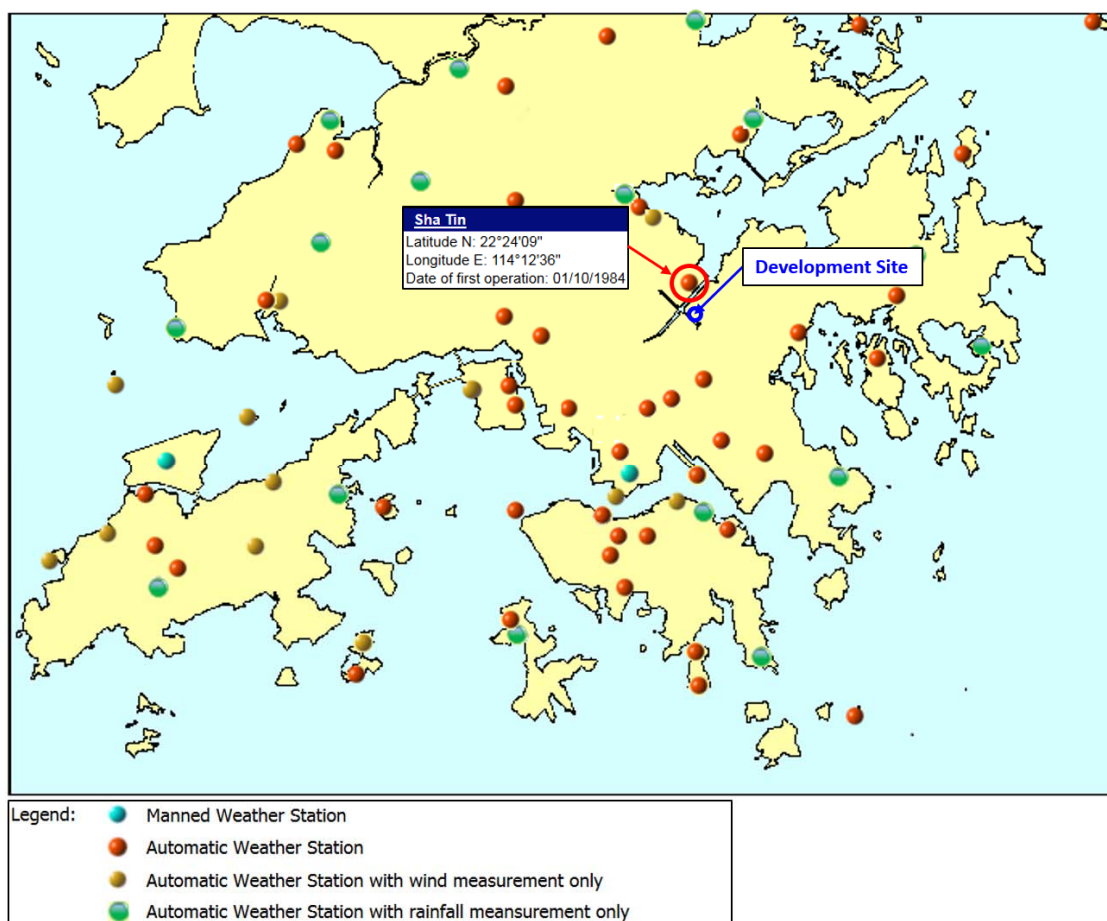


Figure 8 Location of HKO Shatin Weather Station
(Source: http://www.weather.gov.hk/cis/annex/hkwxstn_e.htm)

Table 3 Monthly Wind Direction Recorded at Shatin Weather Station from 1985 to 2015 (Source: Hong Kong Observatory)

ong Kong Observatory)

Month		Prevailing Wind Direction (°)
January		30
February		90
March		80
April		90
May		90
June	(Summer)	220
July		220
August		220
September		90
October		90
November		30
December		30
Annual		90

² Summary of Meteorological and Tidal Observations in Hong Kong

3.4. SUMMARY OF ANNUAL AND SUMMER PREVAILING WINDS

The three sets of wind data have been studied. The wind data from the relevant wind tunnel report, RAMS and Shatin Weather Station indicated prevailing winds directions are tabulated in Table 4.

Since RAMS Wind Data is the most relevant to the Development Site in terms of location and topography, it is concluded that the annual prevailing winds of the Development Site are coming from NNE, E and ESE directions, while the summer prevailing winds are coming from E, S, SSW and SW directions.

Table 4 Prevailing wind directions for the Study Area

Prevailing Wind Direction	Wind Tunnel Test	RAMS	HKO Shatin Weather Station
Annual	ENE/E/NNW	NNE/E/ESE	E
Summer	E/S/SW/WSW	E/S/SSW/SW	SW

4. QUALITATIVE ASSESSMENT OF EXISTING CONDITION OF THE DEVELOPMENT SITE WITH PLANNED DEVELOPMENTS

The Development Site is located in a flat built-up area facing the river channel in the south-west and surrounded by building clusters in the east and north. With consideration of the existing and planned developments near the Development Site, the wind environments under both annual and summer conditions are qualitatively assessed below based on the wind data presented in Section 3.

4.1 NNE Wind

The incoming NNE wind would mainly enter the SMBA from On Sum Street and On Kwan Street (Figure 9). Part of the wind would be diverted by the planned development into the opening of the noise barriers and ventilate the area along On Ming Street (green arrow). Wind travelling along On Ping Street will be blocked by Heung Yee Kok Building at pedestrian level (orange arrow). The NNE wind would adopt the major breezeway near Tai Chung Kiu Road to reach Siu Lek Yuen Road Playground (black arrow). The noise barrier of approximately 5m in height along Tate's Cairn Highway would shield the HKBU institutions and International Christian School sites from pedestrian level wind. As the existing condition of the Development Site comprises Jockey Club Kitchee Centre which is mainly an open area with no major wind obstructing structures, the incoming wind would be able to flow across the Development Site resulting in good ventilation performance along Siu Lek Yuen Road Playground and the perimeter of City One Shatin (blue arrows).

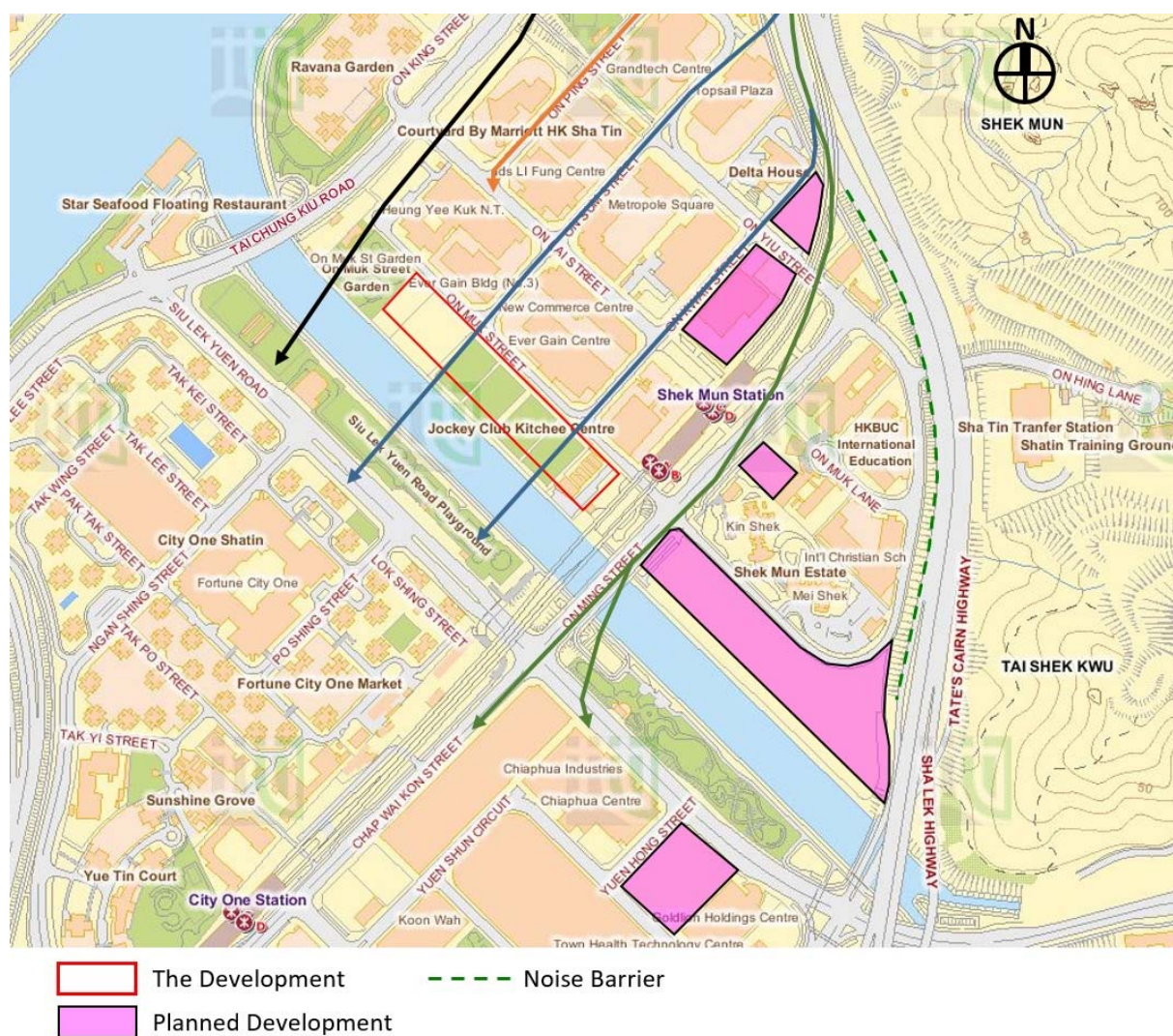


Figure 9 Breezeways around the Development Site (NNE wind)

4.2 E and ESE Winds

The E and ESE winds would be weakened by the existing building cluster including Shek Mun Estate, HKBU Affiliated Wong Kam Fai Secondary School (HKBUAS), Shek Mun Estate Phase 2 (under construction), and also, the noise barrier of approximately 5m in height at the perimeter (Figure 10) located in the eastern side of the Development Site. Wind from On Hing Lane would skim over the noise barriers to flow into SMBA via On Yiu Street (blue arrow). A portion of incoming wind would be expected to be channelled into On Muk Lane and skim over the low-rise structures in HKBUAS sites to reach On Lai Street (green arrow). The presence of Shek Mun Estate and Shek Mun Estate Phase 2 (under construction) with maximum building height of 140mPD would modulate incoming wind into On Muk Street to penetrate through the Development Site to reach On Muk Street Garden without much blockage (black arrow). Shing Mun Nullah will form the major wind corridor under E and ESE wind condition (red arrow).

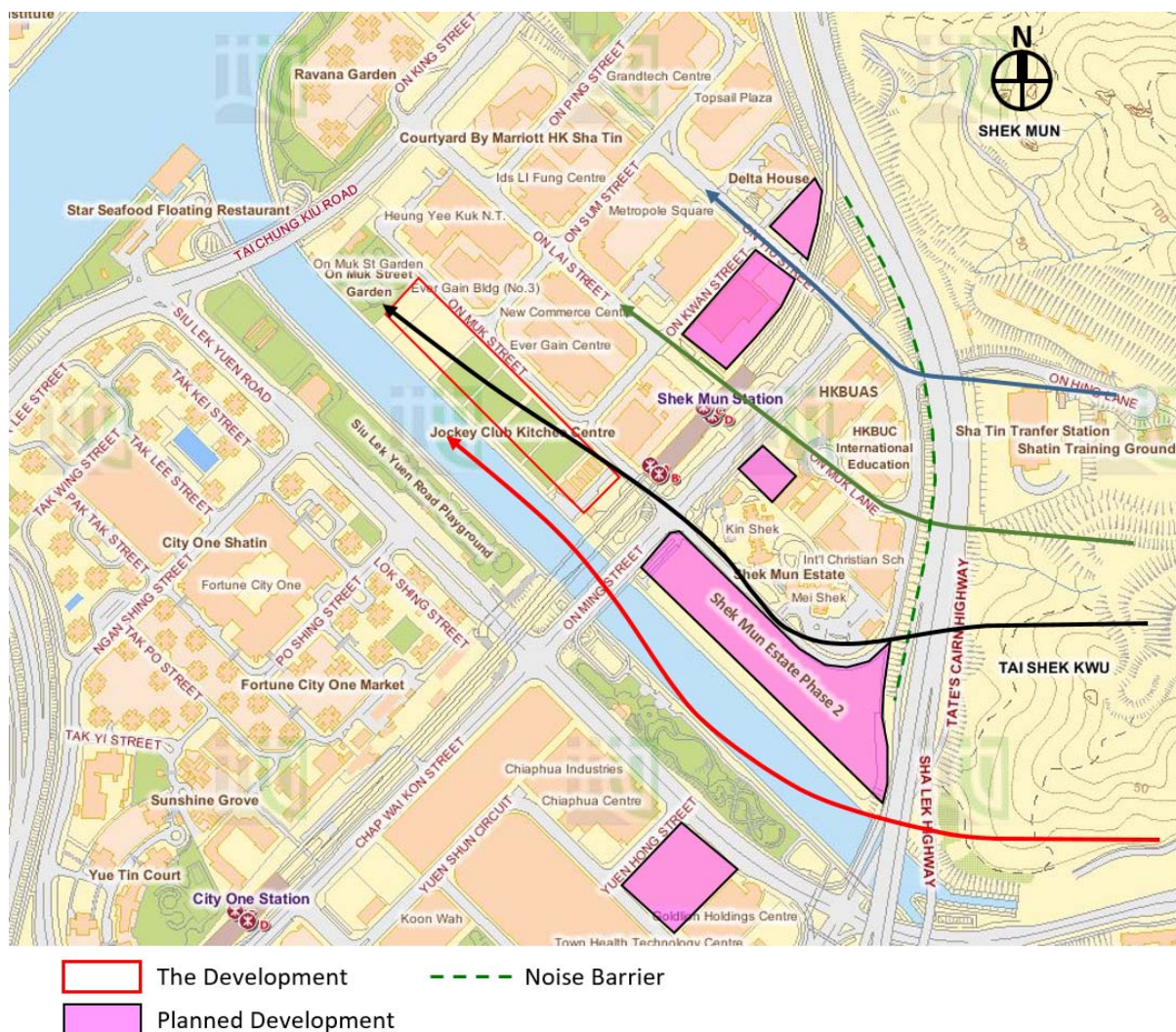


Figure 10 Breezeways around the Development Site (E and ESE winds)

4.3 S Wind

S wind would flow freely along the Tate's Cairn Highway to the east of the Development Site (blue arrow). Majority of the S wind would be modulated by City One Shatin and the industrial cluster at the south to flow along Ngan Shing Street and Chap Wai Kon Street. Wind entered Ngan Shing Street and Tak Wing Street would be expected weaken by the dense built area (i.e. City One Shatin) (green arrow). Incoming wind from Chap Wai Kon Street would be redirected at open areas along the River Channel and reach the Development Site (black arrow).

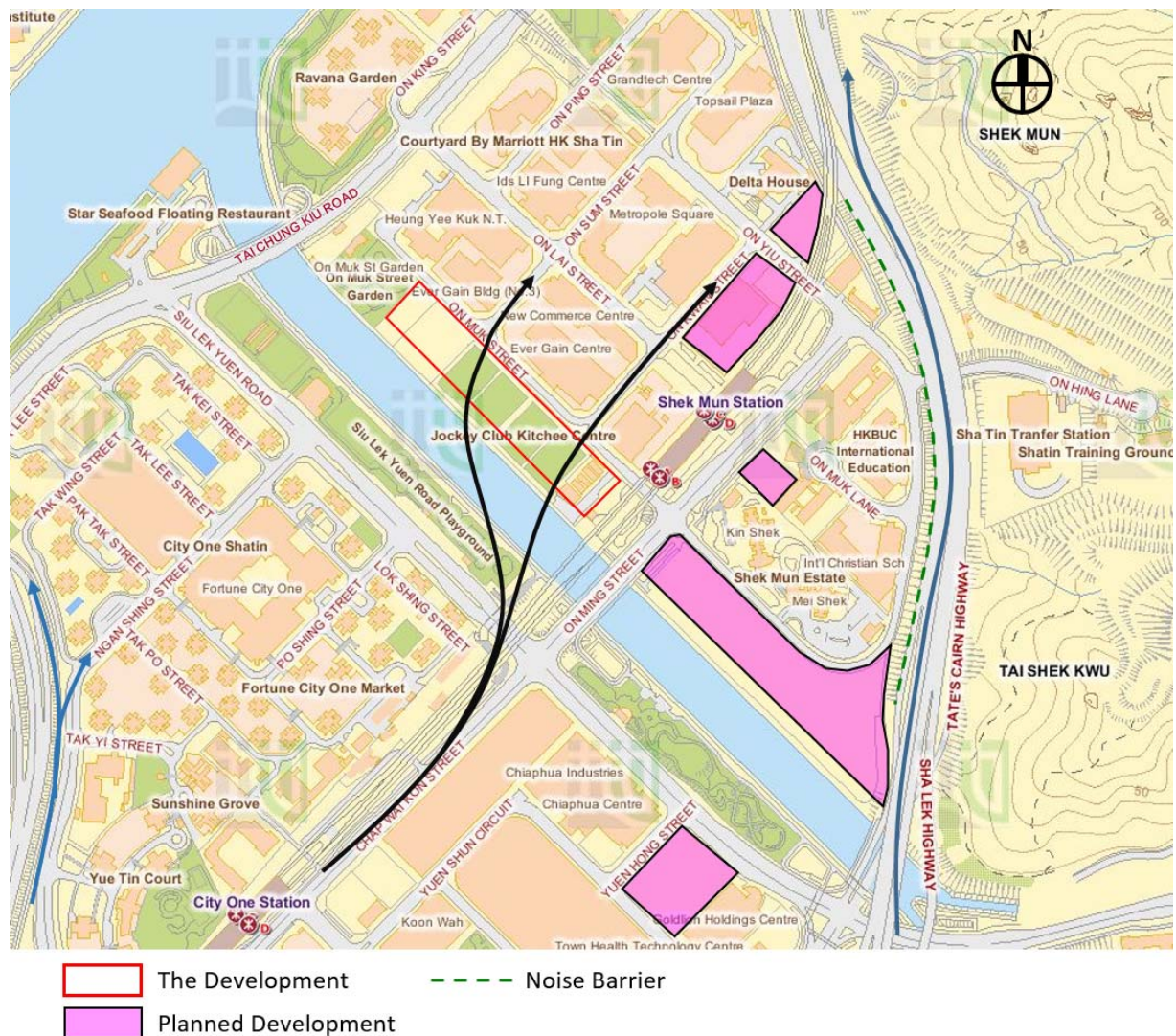


Figure 11 Breezeways around the Project Area Development Area (S wind)

4.4 SSW and SW Winds

The incoming SSW and SW winds from Shing Mun River would travel along Tai Chung Kiu Road towards the open lot adjacent to the Courtyard by Marriott Hong Kong Sha Tin (blue arrow). The large cluster of existing high-rise residential buildings of City One Shatin located to the immediate south west of the Development Site would block the winds coming from south western quadrant (Figure 12). A small portion of the incoming wind would be able to penetrate through this cluster via Ngan Shing Street and reach On Muk Street Garden and On Sum Street (green arrow). Majority of flow will flow along Chap Wai Kon Street and start disperses once reaching the open space (river channel). The main stream would continue to flow along On Ming Street while a portion of wind may be diverted towards the Development Site and enter On Kwan Street (black arrow).

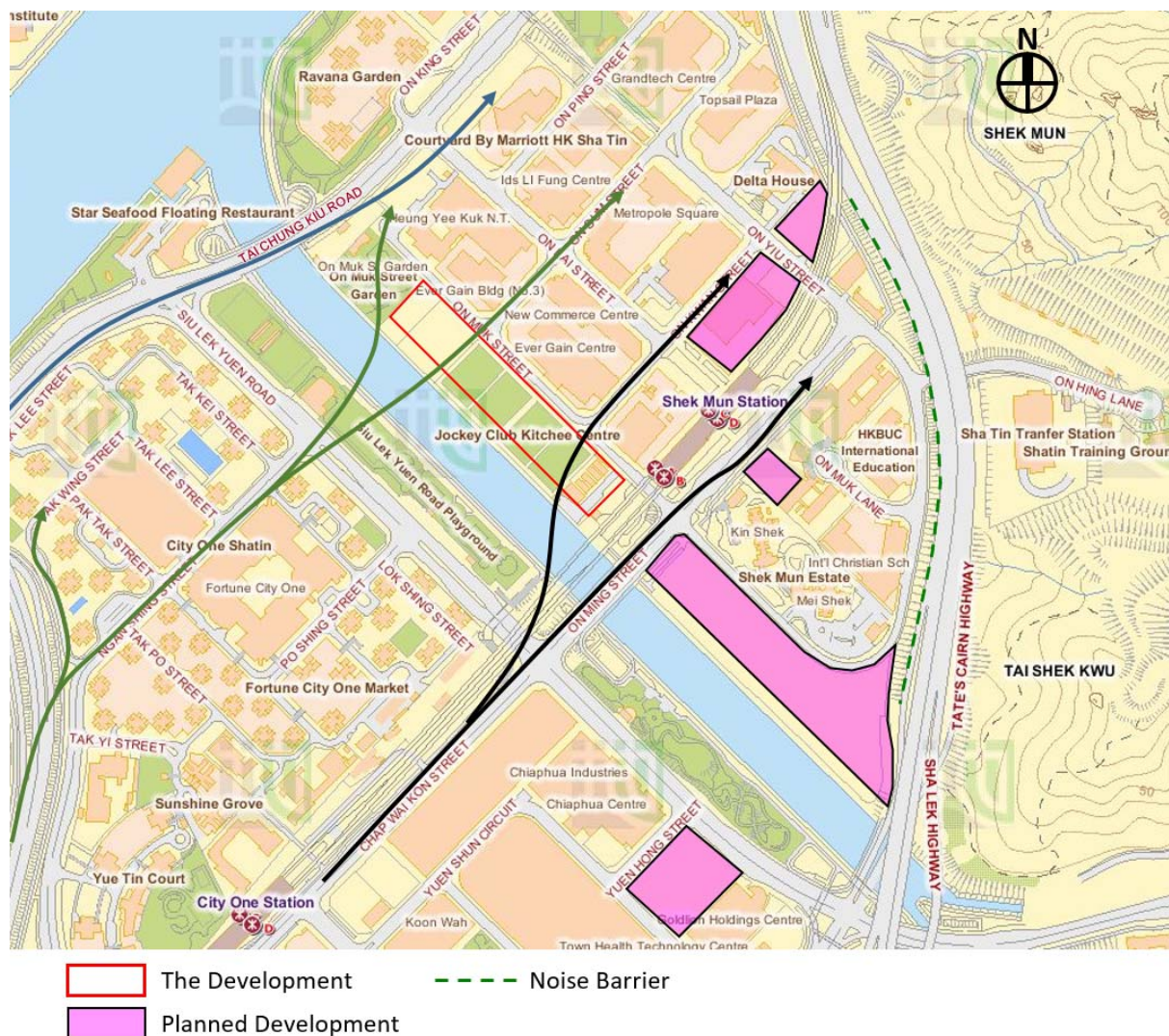


Figure 12 Breezeways around the Development Area (SSW and SW winds)

5. PRELIMINARY PLAN

5.1. PROPOSED SCHEME (PHASES 1, 2 & PRIMARY SCHOOL)

Under the preliminary plan, the proposed public housing development has a plot ratio of 6 and consists of three domestic blocks sitting at grade with a maximum building height of 116mPD and a primary school (approximate 35mPD) to the east of the Development Site. Block 1 makes up Phase 1 of the development, while Blocks 2 and 3 are of Phase 2. The preliminary disposition of the building blocks and the open lot carpark at grade of 5.2mPD provides separation gaps of approximately 57m between Blocks 1 & 2, 15m between Blocks 2 & 3, 26m between Block 3 and the primary school. The 57m and 26m gaps more or less align with the air paths along On Sum Street and On Kwan Street. Figure 13 shows the indicative layout plan of the Development Site.

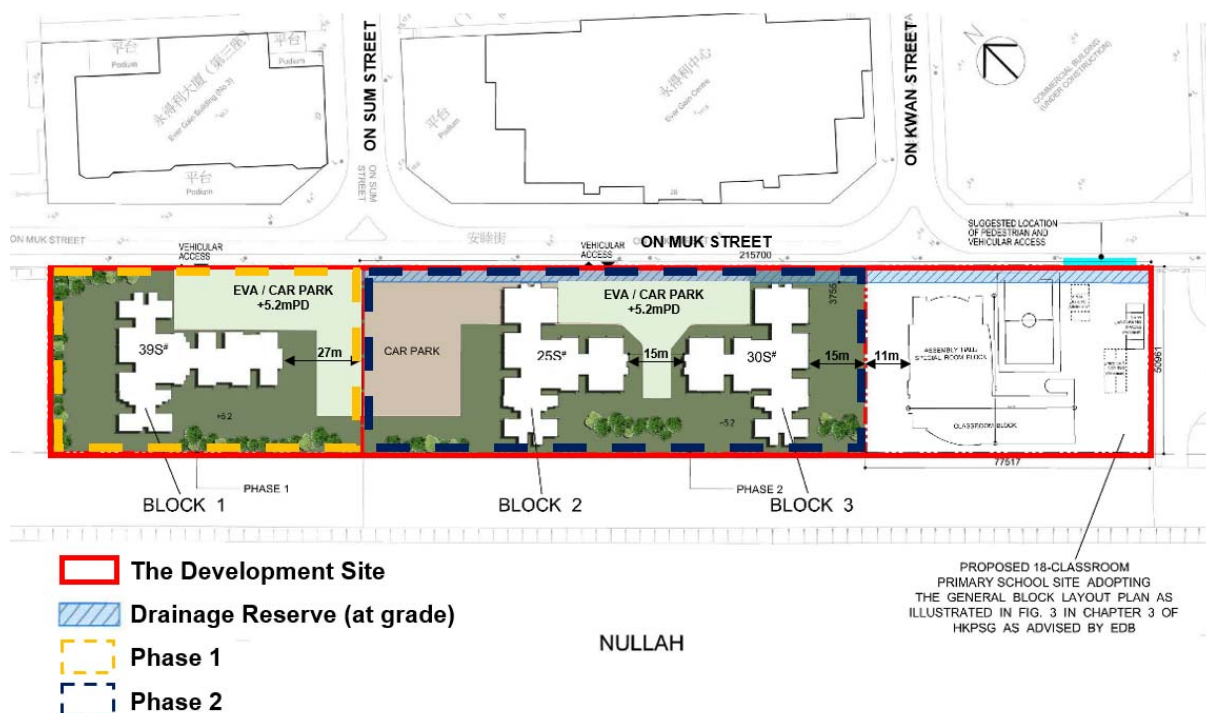


Figure 13 Indicative Layout Plan of Proposed Development (site layout subject to detailed design)

5.2. REVISED SCHEME (PHASE 1 ONLY)

In response to the public concerns, rezoning of the land occupied by the football training centre (i.e. Phase 2 and primary school) is postponed until the relocation arrangement for the football training centre is settled. In view of the above, HD has prepared a revised layout plan by adding new structures (i.e. car park, roof garden and recreation area) at the southern half of the Phase 1 site. As shown in the indicate layout plan of the Revised Scheme (Figure 14), one 32-storey building block (not more than 110mPD) with 1-storey car park of about 7.7mPD located to the south of Ever Gain Building is proposed.



Figure 14 Indicative Layout Plan of Revised Scheme (site layout subject to detailed design)

6. VENTILATION PERFORMANCE OF PROPOSED SCHEME ON THE SURROUNDING

6.1 NNE Wind

Figure 15 demonstrates anticipated flow of NNE wind. As the proposed scheme provides a gap which aligns with the air path of On Sum Street, the NNE wind would mainly enter from On Sum Street and flow freely via the open lot carpark, the waterfront, Siu Lek Yuen Road Playground and reach City One Shatin (black arrow). Incoming wind from On Kwan Street flows through the 26m separation between Block 3 and the proposed primary school to Siu Lek Yuen Road Playground. A small portion of wind could skim over the proposed low-rise school development (~35mPD) at mid-level and reattach at Siu Lek Yuen Road Playground as the nullah provides sufficient separation for reattachment (green arrow). Two building separations (i.e. 57m-wide building separation between Blocks 1 and 2 and 26m-wide building separation between Block 3 and proposed primary school) adopted in the proposed layout could allow continuous NNE wind flow from the existing air paths to the leeward region. However, the proposed high-rise residential blocks at grade would extend the wake area from Ever Gain Centre when compared with the existing condition. It is expected that the wake would extend to the nullah and reattached at Siu Lek Yuen Playground.

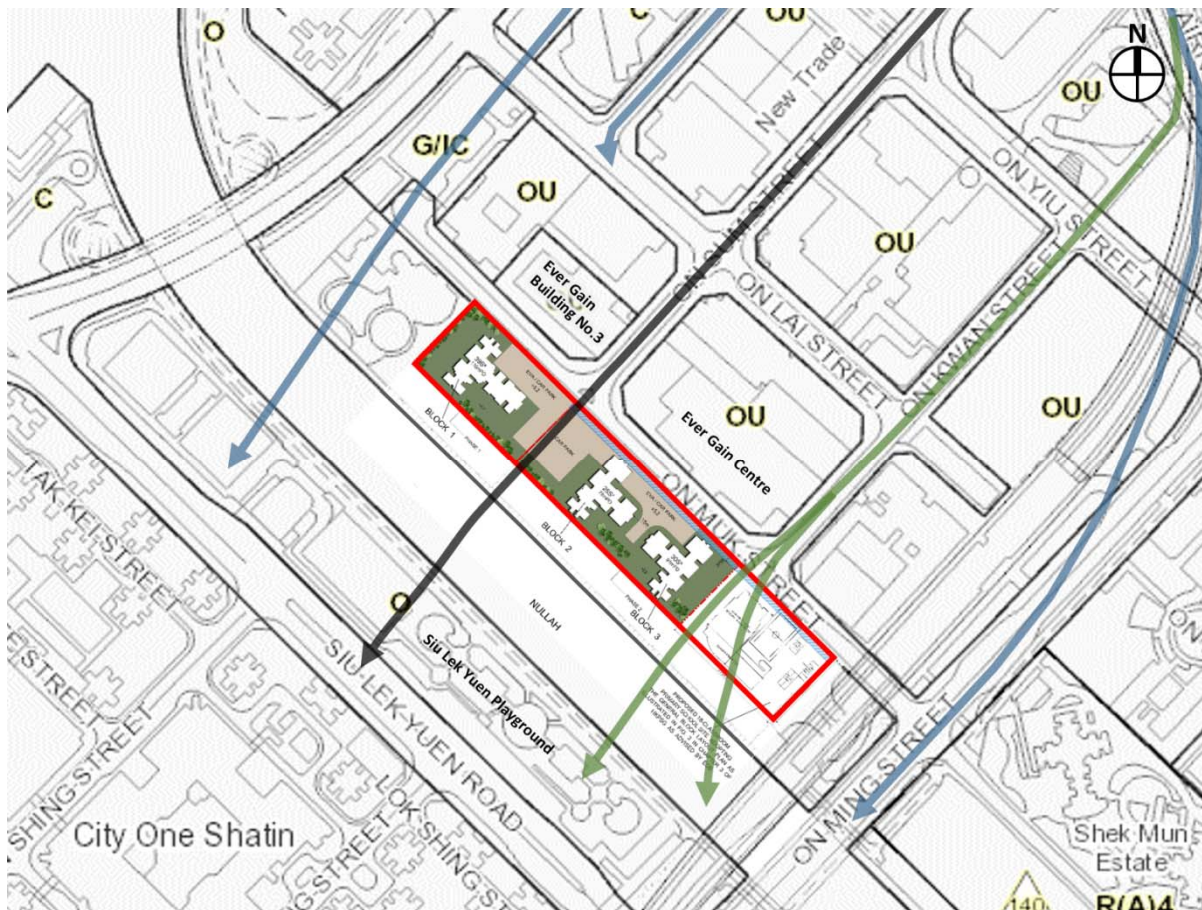


Figure 15 Wind Environment under NNE Wind (site layout subject to detailed design)

6.2 E and ESE Winds

The E and ESE winds would mainly enter from On Muk Street and Shing Mun Nullah (black arrow). With the proposed development, the effective width of the existing wind corridor along the nullah and abutting open spaces would be narrowed down. However, the Development Site is linear in shape and its alignment runs parallel to the adjacent major air paths along On Muk Street and Shing Mun Nullah (Figure 16). In this connection, it is expected that the presence of the Proposed Scheme would not induce significant disturbance to the air flow along On Muk Street and Shing Mun Nullah. However, E and ESE winds would be diverted by the proposed development such that it may unavoidably impose a wake area on On Muk Street Garden. This impact could be reduced by the setback of Block 1 from the northwestern site boundary.

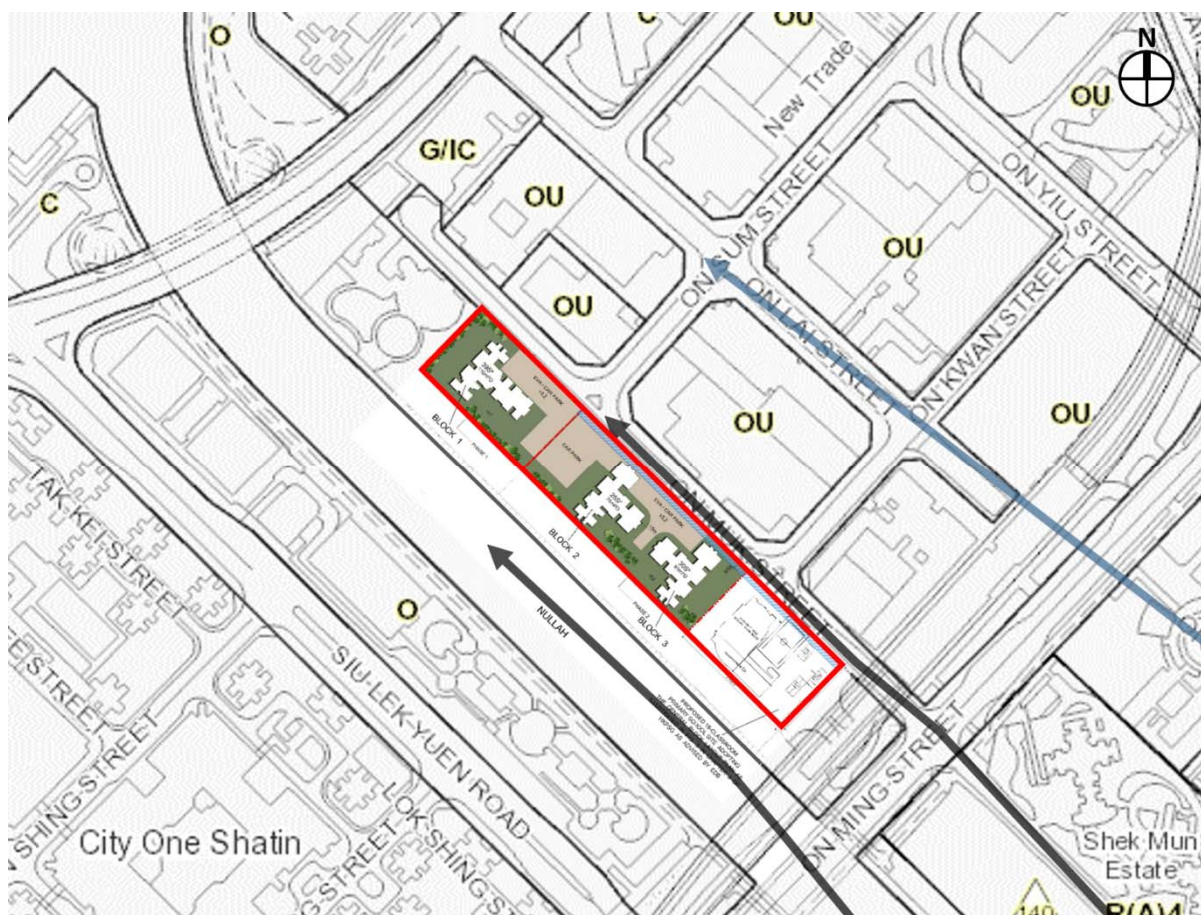


Figure 16 Wind Environment under E and ESE Winds (site layout subject to detailed design)

6.3 S Wind

Majority of the S wind that would reach the Development Site passes through Chap Wai Kon Street and open spaces beside the nullah. The proposed development would potentially shield the incoming wind from entering the air paths of SMBA including On Sum Street and On Kwan Street (black arrow). However, provision of building separations (i.e. 15m-wide gap between Blocks 2 and 3 and 26m-wide gap between Block 3 and proposed primary school) would allow wind penetration to reach On Muk Street and mitigate the potential adverse air ventilation impact at the leeward side. A small portion of S wind would skim over the proposed low-rise school in the Development Site in reaching On Kwan Street (red dash line).



Figure 17 Wind Environment under S Wind (site layout subject to detailed design)

6.4 SSW and SW Winds

The high-rise building clusters of City One Shatin at the south-west of the Development Site would potentially block the incoming wind to the Development Site and its leeward region. Presence of the proposed development would further reduce wind availability to its downwind vicinity such as On Muk Street as compared to the existing scenario. The SSW and SW winds would mainly travel along Ngan Shing Street and Chap Wai Kon Street/ On Ming Street to reach the Development Site and On Ming Street respectively (black arrows). With the provision of three building separations, portion of the SSW and SW incoming winds would penetrate through the Development Site in reaching On Muk Street and SMBA further downstream (black and green arrows). Part of the high level incoming wind from Chap Wai Kon Street would be expected to skim over the school site and ventilate On Muk Street (orange dash arrow). It is also anticipated that SSW and SW winds travel along Tai Chung Kiu Road would not be affected by the proposed development (red arrow).

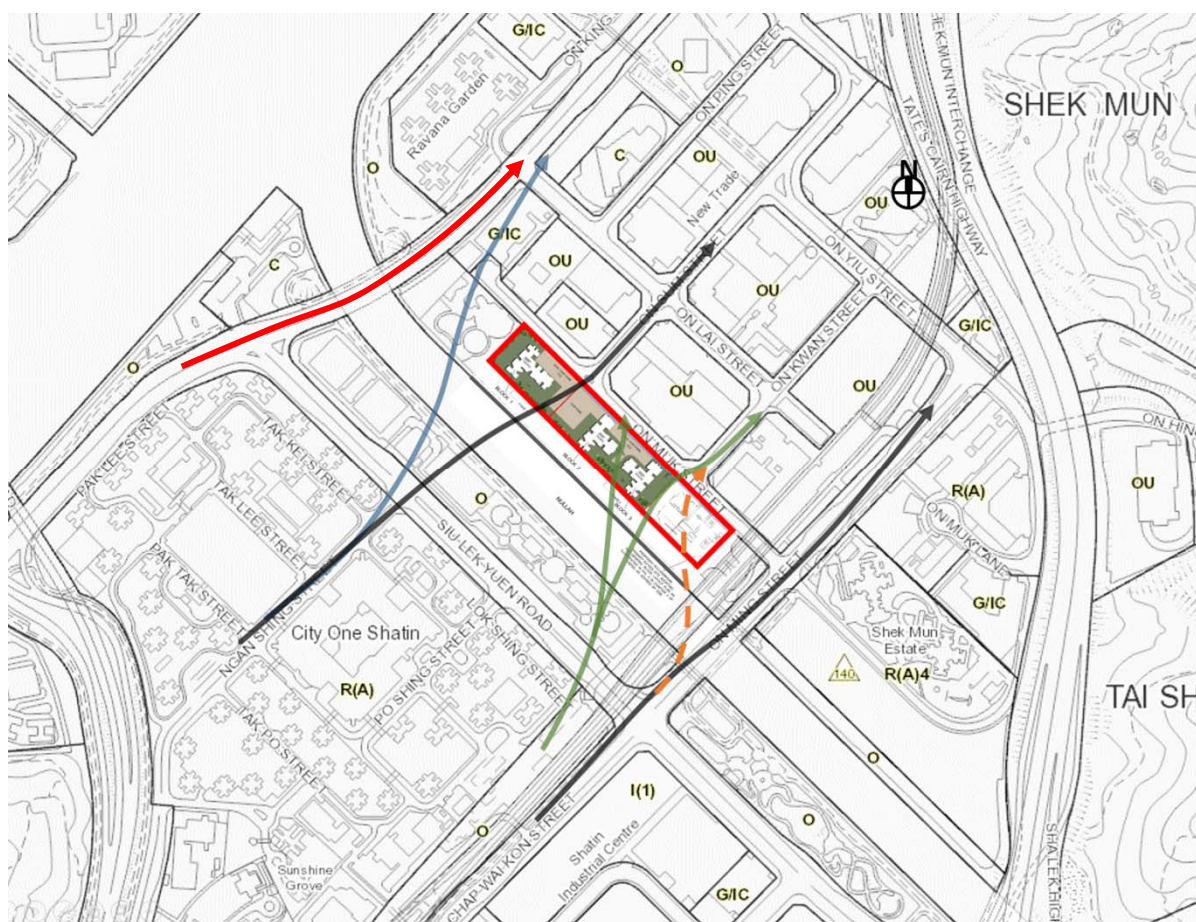


Figure 18 Wind Environment under SSW and SW Winds (site layout subject to detailed design)

7. VENTILATION PERFORMANCE OF REVISED SCHEME ON THE SURROUNDING

7.1 NNE Wind

Figure 19 demonstrates the anticipated flow of NNE wind under Phase I of the Revised Scheme. As there is only one residential block which is setback from the air path of On Sum Street at the downstream of Ever Gain Building No.3, the NNE wind would mainly enter from On Sum Street and skim over the 1-storey carpark in reaching City One Shatin (black arrow). Incoming wind from On Kwan Street flows freely to Siu Lek Yuen Road Playground as the football court at Jockey Club Kitchee Centre would be retained in the Revised Scheme (green arrow). Although the proposed development would inevitably create some localised impact on the immediate southwest of the Development Site, it is not expected that other wind paths (blue arrows) would be affected.

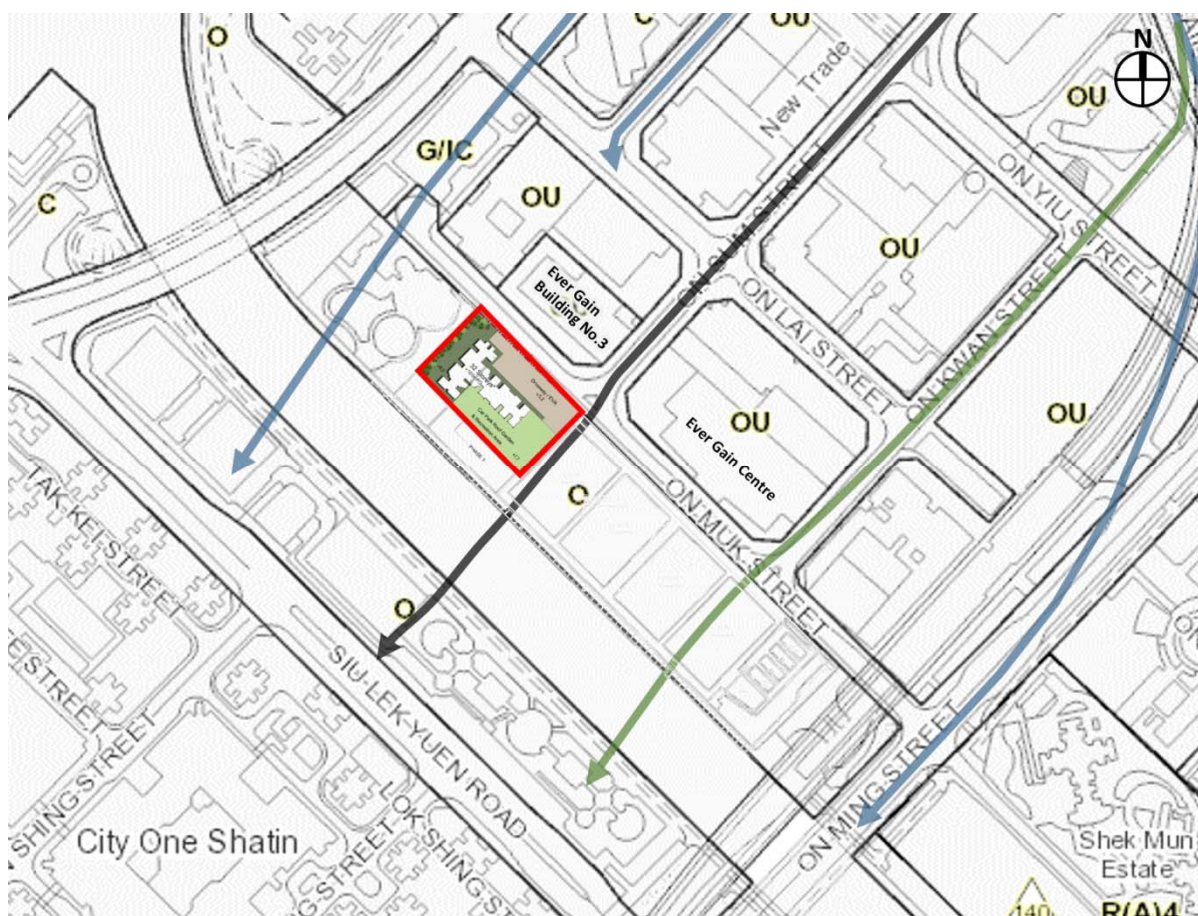


Figure 19 Wind Environment under NNE Wind (site layout subject to detailed design)

7.2 E and ESE Winds

The E and ESE winds would mainly enter from On Muk Street and Shing Mun Nullah (black arrow). The development footprint for the Revised Scheme is small and its alignment runs parallel to the adjacent major air paths along On Muk Street and Shing Mun Nullah (Figure 20). In this connection, it is expected that the presence of the Revised Scheme would have minimal impact on the effectiveness of these air paths under E and ESE winds. However, similar to the Proposed Scheme, it is inevitable that the Revised Scheme would create wake on the immediate part of On Muk Street Garden. Such impact could be reduced by setback of the residential block from the northwestern boundary.

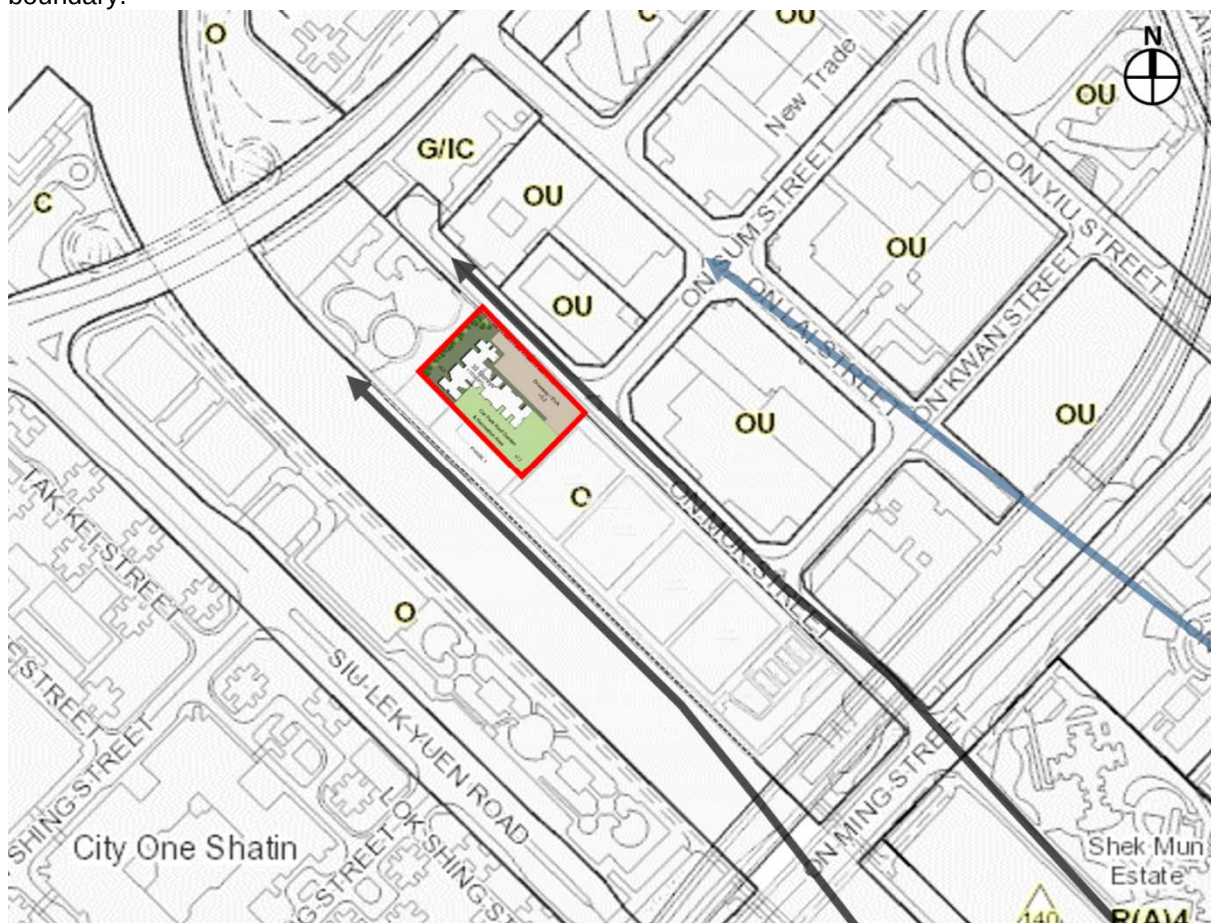


Figure 20 Wind Environment under E and ESE Winds (site layout subject to detailed design)

7.3 S Wind

Majority of the S wind that would reach the Development Site passes through Chap Wai Kon Street and open spaces beside the nullah. The retained football court at Jockey Club Kitchee Centre allows the incoming wind from entering the air paths of the SMBA including On Muk Street, On Sum Street and On Kwan Street (black arrows). It is anticipated that the development under the Revised Scheme is not likely to induce adverse impact under S wind condition.



Figure 21 Wind Environment under S Wind (site layout subject to detailed design)

7.4 SSW and SW Winds

The high-rise building clusters of City One Shatin at the south-west of the Development Site would potentially block the incoming wind to the Development Site and its leeward region. The SSW and SW winds would mainly travel along Ngan Shing Street / On Ming Street to reach the Development Site (black arrow). The presence of proposed development would adversely affect the ventilation performance of its downwind vicinity such as the section of On Muk Street between the subject development and Ever Gain Building 3 as compared to the existing scenario. However, compared with the Proposed Scheme, the wake zone created by the Revised Scheme would be much smaller. As SSW and SW incoming winds would freely flow through the retained football court towards On Kwan Street into SMBA and ventilate On Muk Street (green arrow). It is not expected that the other air paths such as that along Tai Chung Kiu Road would be affected by the Revised Scheme. It is also anticipated that SSW and SW winds travel along Tai Chung Kiu Road would not be affected by the proposed development (red arrow).

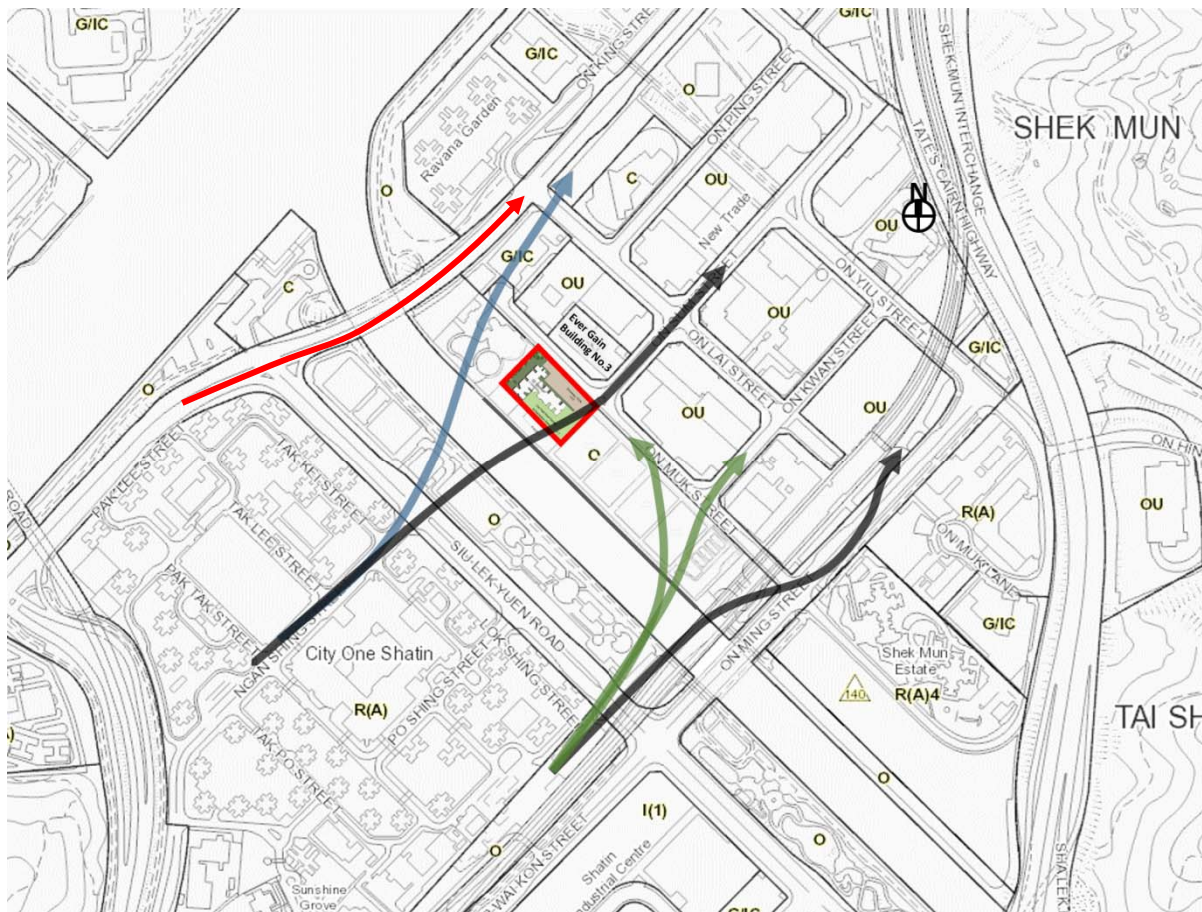


Figure 22 Wind Environment under SSW and SW Winds (site layout subject to detailed design)

8. GOOD DESIGN FEATURES AND FURTHER ENHANCEMENTS

According to the analysis from previous section, the proposed development shall have certain localized wind impact while compared with the existing condition. To alleviate the potential adverse wind impact and improve the wind performance of the Development and its surrounding areas, the following good design features are identified and further enhancement measures are recommended.

8.1. PROPOSED SCHEME

Building Separation

With the provision of the three building separations (i.e. 57m-wide between Blocks 1 and 2, 15m-wide between Blocks 2 and 3, and 26m-wide between Block 3 and proposed primary school), wind penetration through the Proposed Scheme is facilitated to reach the downstream areas.

All proposed building separations should be designated as Non-Building Areas (NBAs) for effective wind penetration.

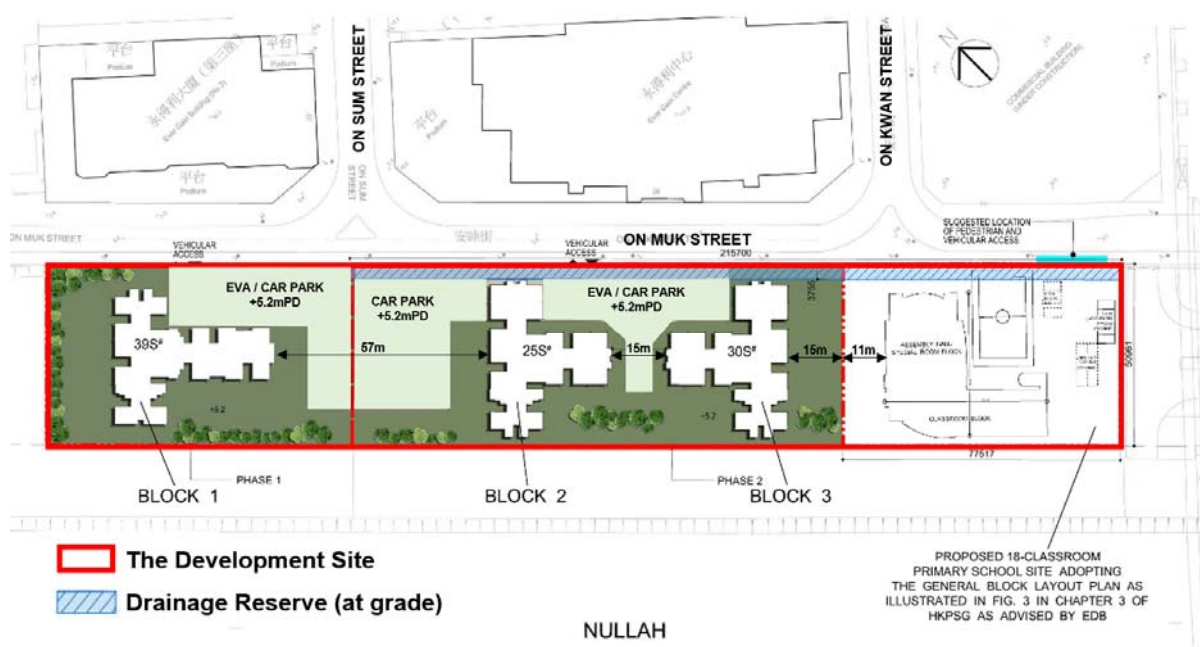


Figure 23 Proposed building separations

Building Setback

Provision of 18m building setback from north-western site boundary of the Proposed Scheme could help in minimizing the wake area imposed on On Muk Street Garden.

Podium-free Design

Without podium design, low level permeability is enhanced which is beneficial to pedestrian air flow.

High Permeability

Based on the above analysis, it is recommended that the future high-rise development at the Development Site should avoid long building frontage along the Development boundary at nullah frontage. In general, further recommended design principles for scheme optimization to be considered at the detailed design stage to facilitate wind penetration could include:

- Building Permeability equivalent to 20% to 33.3% of total frontal area with reference to PNAP APP-152;

- Minimization of podium bulk with ground coverage of no more than 65%;
- Greenery (preferably tree planting) of no less than 30% for sites larger than 1 ha, and 20% for sites below 1 ha at lower levels, preferably at grade;
- Building setback with reference to PNAP APP-152;
- Avoidance of long continuous façades; and
- Reference could also be made to recommendations in the Hong Kong Planning Standards and Guidelines.

Empty Bay at Ground Floor Level

To further alleviate the potential adverse air ventilation impact at pedestrian wind environment, ground floor empty bays of at least 3m in height are suggested at the east wing of Blocks 1 (22.5m-wide) & 2 (10.5m-wide) and at the west wing of Block 3 (10.5m-wide). These could increase wind permeability area and facilitate wind penetration to the immediate surrounding along On Muk Street under SW quadrant wind as well as the promenade under NNE wind.

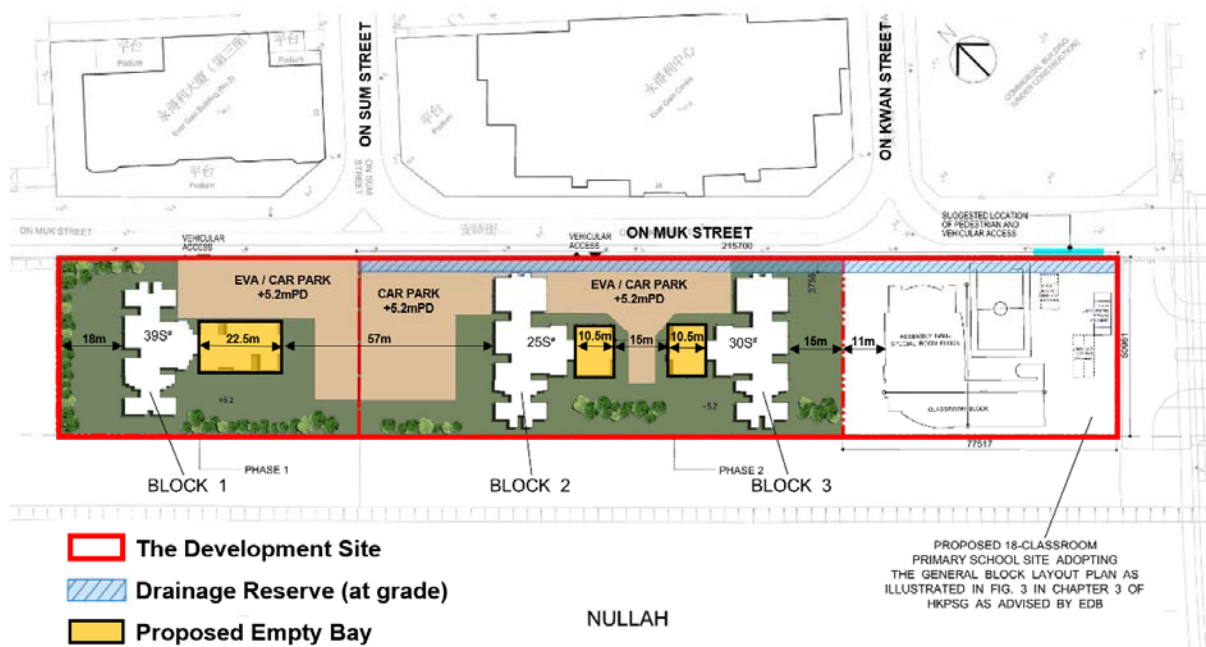


Figure 24 Recommended Location of Ground Floor Empty Bay (site layout subject to detailed design)

Shift of school-site building towards On Ming Street

Another further mitigation measure is recommended to align the school-site building with the wind corridor of On Kwan Street by shifting the building mass towards On Ming Street., This would allow a wider and more effective wind corridor for wind to penetrate and ventilate the leeward region under NNE and SW quadrant wind.

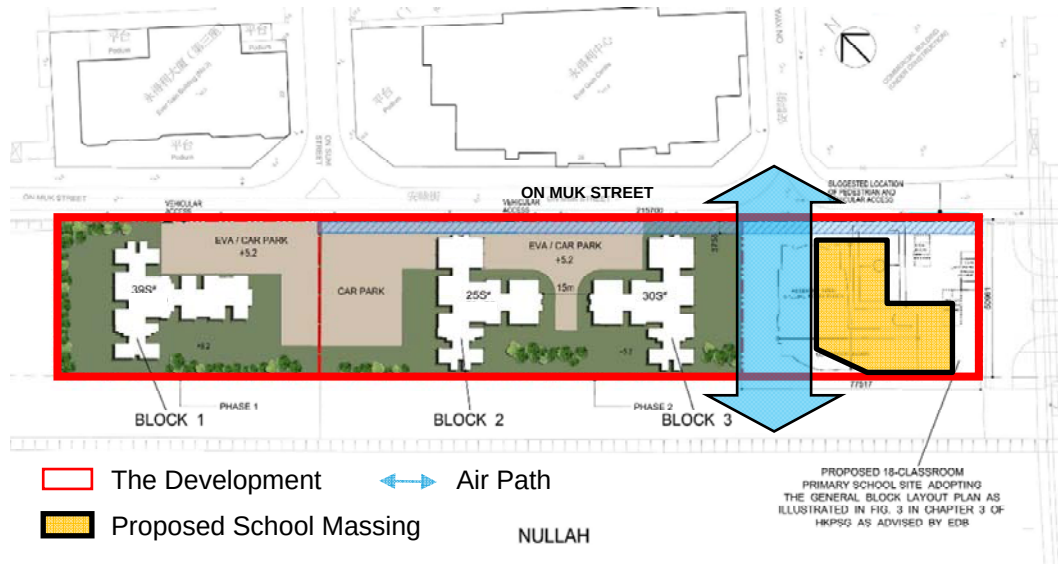


Figure 25 Recommended Shift of School Massing (site layout subject to detailed design)

8.2. REVISED SCHEME

Building Setback

Provision of 13m building setback from the north-western site boundary of the Revised Scheme could help in minimizing the wake area imposed on On Muk Street Garden (Figure 26.)

Building height of 1-storey carpark

The carpark under the Revised Scheme is only 1-storey in height at absolute building height of 2.5m. It allows wind from/to On Sum Street to skim over it easily. As such, the building height of carpark should not exceed 1-storey.



Figure 26 Football court provide open space (site layout subject to detailed design)

Retained football court at Jockey Club Kitchee Centre

The football court at Jockey Club Kitchee Centre provides a large wind entrance for On Sum Street and On Kwan Street under most of the prevailing wind directions. Also, retaining football court reduces the development scale and the potential adverse air ventilation impact on the surrounding would be minimized.

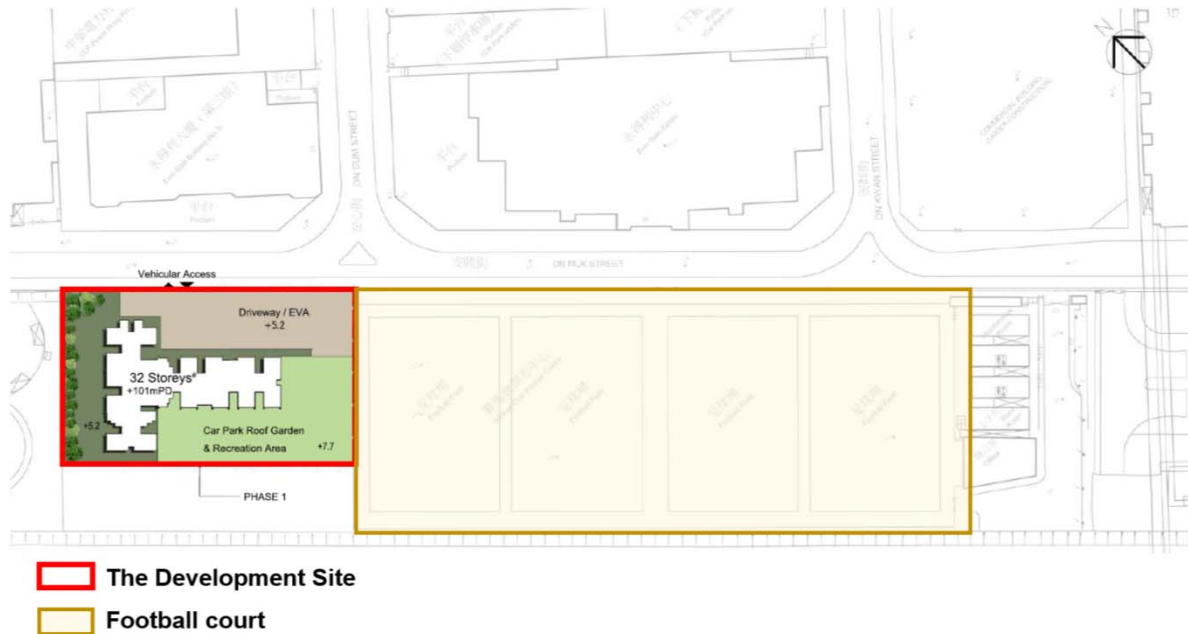


Figure 27 Football court provide open space (site layout subject to detailed design)

9. FURTHER STUDY

Proposed Scheme

For the Proposed Scheme, it is anticipated that with the provision of the proposed mitigation measures (i.e. three NBAs, setback from north-western site boundary, podium-free design), the Proposed Scheme would not create significant adverse air ventilation impact on the surrounding of the proposed development. Nevertheless, it is recommended that a quantitative AVA should be conducted at the detailed design stage for scheme optimization including the effectiveness of the suggested measures of ground floor empty bays and revised disposition of the primary school.

Revised Scheme

For the Revised Scheme, considering the small scale of development as well as provision of mitigation measures (i.e. 13m setback from the north-western site boundary and building height restriction of 1-storey carpark), it is not expected such Revised Scheme would create significant adverse air ventilation impact on the pedestrian wind environment in the surrounding of the site. If these measures cannot be provided in the future scheme, further quantitative assessments should be conducted to demonstrate that the performance of any future development would be no worse off than the scenario with these measures.

10. CONCLUSION

Qualitative assessment of the wind environment of the Development at On Sum Street, Shek Mun was conducted. The Development consists of three domestic blocks and a GIC building for Proposed Scheme while one domestic blocks with a carpark for Revised Scheme.

According to the analysis, the annual prevailing wind comes from E, NNE and ESE directions and the summer prevailing wind is from SW, SSW, S and E direction. The findings of the EE study are summarized in below:

Annual Wind Condition

- NNE wind would mainly flow along On Sum Street and On Kwan Street. With the provision of three NBAs, setback from north-western site boundary and adoption of podium-free design under the Proposed Scheme, it is expected the development would not induce significant disturbance on the NNE wind flow from On Sum Street and On Kwan Street to the open space at Siu Lek Yuen Road. For the Revised Scheme, NNE wind is expected to travel along On Sum Street and skim over the 1-storey carpark. No significant adverse impact has been identified for the Revised Scheme.
- E and ESE winds mainly flow along On Muk Street and Shing Mun Nullah. As the Proposed Scheme is in alignment with the adjacent air paths along On Muk Street and Shing Mun Nullah, thus it is expected the Proposed Scheme would not likely disturb the air flow along these air paths. Setback from north-western site boundary should be incorporated to minimize the wind shadow imposed on On Muk Street Garden induced by the proposed development. Similar observation is valid for Revised Scheme.

Summer Wind Condition

- Under E wind, similar to annual easterly wind condition, the incoming wind mainly flows along On Muk Street and Shing Mun Nullah. As the Proposed Scheme is in alignment with the adjacent air paths along On Muk Street and Shing Mun Nullah, thus it is expected the Proposed Scheme would not likely disturb the air flow along these air paths but create wind shadow to On Muk Street Garden. Similar observation is also obtained for Revised Scheme
- Under S, SSW and SW wind, the wind mainly flows along Ngan Shing Street and Chap Wai Kon Street / On Ming Street. As the NBAs in the Proposed Scheme are in alignment with On Sum Street and On Kwan Street, it is expected that the Proposed Scheme would not induce significant disturbance to the air flow except a section of On Muk Street close to the development. Since the football court at Jockey Club Kitchee Centre is retained in Phase II, it is not expected that a single housing block with 1-storey carpark proposed in Phase I would create significant impact under the Revised Scheme

Proposed Scheme

For the Proposed Scheme, in addition to the NBAs, setback and podium-free design, it is recommended that a ground floor level empty bay could further facilitate wind penetration across the development in enhancing the pedestrian wind environment of the surrounding, particularly for On Muk Street under summer SW quadrant wind. As for the school site, it is recommended to align the building mass with the wind corridor of On Kwan Street to allow more effective wind penetration under SW quadrant wind.

It is recommended that a quantitative AVA should be conducted at the detailed design stage for scheme optimization including the effectiveness of the suggested measures of ground floor empty bays and revised disposition of the primary school.

Revised Scheme

For the Revised Scheme, with the provision of building setback and building height of the carpark maintained at 1-storey, no significant impact has been identified due to the relatively small development scale.

If the good design measures (i.e. 13m setback from the north-western site boundary and building height restriction of 1-storey carpark) cannot be provided in the future development, further quantitative assessments should be conducted to demonstrate that the performance of any future development would be no worse off than the scenario with these measures.

11. REFERENCE

Experimental Site Wind Availability Study for Sha Tin, Hong Kong (August 2009)

Air Ventilation Assessment Study for Fo Tan and Siu Lek Yuen Industrial Areas (December 2015)

Shek Mun Land use Plan B16

(http://www.pland.gov.hk/pland_en/p_study/comp_s/industrial_report_2014/appendices/b16.pdf)

Provision of Open Space and Major G/IC Facilities in
Draft Sha Tin Outline Zoning Plan No. S/ST/32A Planning Area
(as at October 2016)

Type of Facilities	Hong Kong Planning Standards and Guidelines (HKPSG)	HKPSG Requirement (based on planned population)	Provision		Surplus/ Shortfall (against planned provision)
			Existing Provision	Planned Provision	
District Open Space	10 ha per 100,000 persons	49.25 ha	53.22 ha	67.21 ha	+17.96 ha
Local Open Space	10 ha per 100,000 persons	49.25 ha	90.97 ha	107.89 ha	+58.64 ha
Sports Centre	1 per 50,000 to 65,000 persons	7	3	7	0
Sports Ground/ Sports Complex	1 per 200,000 to 250,000 persons	2	1	1	-1
Swimming Pool Complex - standard	1 complex per 287,000 persons	2	2	2	0
Integrated Children and Youth Services Centre	1 for 12,000 persons aged 6-24	6	10	11	+5
Integrated Family Services Centre	1 for 100,000 to 150,000 persons	3	3	3	0
Library	1 district library for every 200,000 persons	3	2	3	0
Hospital Beds	5.5 beds for every 1,000 persons	2,853	2,816	3,534	+681
Clinic/Health Centre	1 per 100,000 persons	5	3	5	0
District Police Station	1 per 200,000 to 500,000 persons	1	1	1	0
Divisional Police Station	1 per 100,000 to 200,000 persons	3	3	3	0

Type of Facilities	Hong Kong Planning Standards and Guidelines (HKPSG)	HKPSG Requirement (based on planned population)	Provision		Surplus/ Shortfall (against planned provision)
			Existing Provision	Planned Provision	
Magistracy (with 8 courtrooms)	1 per 660,000 persons	1	1	1	0
Secondary School	1 whole-day classroom for 40 persons aged 12 -17	553 classrooms	869 classrooms	899 classrooms	+346 classrooms
Primary School	1 whole-day classroom for 25.5 persons aged 6 - 11	857 classrooms	785 classrooms	845 classrooms	-12 classrooms
Kindergarten/ Nursery	26 classrooms for 1,000 children aged 3 to 6	241 classrooms	300 classrooms	346 classrooms	+105 classrooms

Summary of the consultation with the Development and Housing Committee (DHC) of Sha Tin District Council (STDC) regarding the proposed amendments to the approved Sha Tin OZP No. S/ST/32 on 3.11.2016*

The DHC of STDC has been consulted on 3.11.2016 on the proposed amendments to the approved Sha Tin OZP No. S/ST/32. The views of DHC members are summarised below:

General

- (a) DHC members generally supported the proposed Sha Tin Cavern Sewage Treatment Works (STCSTW) (Item A), the proposed columbarium and garden of remembrance development (Item B) and the rezoning of the Olympic Stables site (Item C). However, DHC members in general did not support the proposed public housing development at On Muk Street, Shek Mun (Item D).

Item A: Proposed Sha Tin Cavern Sewage Treatment Works (STCSTW) and its supporting facilities

- (b) DHC members raised concerns on the possible adverse air and noise impacts on the surrounding residents of Chevalier Garden during the construction stage of the STCSTW. Mitigation measures highlighted in the Traffic Impact Assessment should be implemented to minimise the impacts of the construction traffic.
- (c) Some members were concerned about the possible adverse environmental and ecological impacts arising from the proposed STCSTW since the subject site is in proximity to the Ma On Shan Country Park.
- (d) Some members enquired about the future use of the existing Sha Tin Sewage Treatment Works site after the relocation.

Item B: Proposed Columbarium and Garden of Remembrance at On Hing Lane, Shek Mun

- (e) DHC members understand that there was a pressing need to provide more columbarium facilities to fulfil the increasing demand for public niches.
- (f) Some members raised concerns about the vehicular and pedestrian traffic impacts of the proposed columbarium and garden of remembrance development during Ching Ming and Chung Yeung Festivals. They urged the Government to assure the provision and implementation of pedestrian underpass for access between On Muk Street and the proposed columbarium site.
- (g) Some members concerned that the proposed columbarium and garden of remembrance development is in proximity to Shek Mun Estate, and the residents might suffer from air pollution due to burning joss paper.

Item C: Olympic Stables at Sha Tin Race Course

- (h) Some members urged HKJC to provide more sports and community facilities for public enjoyment and the Government should find another site to compensate for the loss of “G/IC” site.
- (i) There were also views that the subject site should be returned to HKSI to support the long term sports development in Hong Kong. A few members doubted the necessity of retaining the subject site for stables, training and other support services for horses since the HKJC was constructing a new training centre with similar facilities in the Conghua district of Guangzhou.

Item D: Proposed Public Housing Development

- (j) Many members indicated that the proposed development would over-strain the capacity of the public transport (i.e. bus, green mini bus and railway). Some members pointed out that carparks (including light goods vehicle and heavy goods vehicle parking) were highly inadequate in Shek Mun and there were serious traffic congestion in the area.
- (k) Some members were concerned about the viability of the proposed development as the site is located in an industrial area and adjacent to the football training centre. The site would be susceptible to air and light pollution as well as noise nuisance.
- (l) There were also concerns that there were insufficient G/IC and other supporting facilities such as sports ground, wet market and clinic etc. in the district to accommodate the new population.
- (m) There were views that the planning of the area should take into account the character of Sha Tin waterfront. The proposal is incompatible with the waterfront character in the Sha Tin locality. The site should be retained as open space for public enjoyment.
- (n) Some members raised concerns on the implementation of open space and other community facilities and motions were passed to urge the Government to implement the planned facilities before proposing more housing developments in Sha Tin.
- (o) Some members suggested that the Government should make use of the Fanling Golf Course for housing development and convert some vacant school premises into temporary accommodation to avoid in-fill single tower type development.

In relation to the comments above, the following motions were passed at the DHC of STDC on 3.11.2016:

1. 動議人：李世榮 和議人：林松茵

就規劃署將原為「康體用地」的 4.7 公頃奧運馬廄用地修改為「其他用途」並註明為「馬場」地帶一事，沙田區議會發展及房屋委員會要求政府在沙田區內尋找相等面積的合適土地，設置休憩康體、市政等綜合設施，以補償予沙田區居民使用。

2. 動議人：黃宇翰 和議人：黃冰芬

鑑於沙田區人口不斷增加，市民對社區及康體設施需求殷切，可是基建發展未能配合，規劃更欠高瞻遠矚。因此，沙田區議會發展及房屋委員會促請政府：

- (a) 全面檢視沙田區整體規劃，以保留城門河兩側的休憩用地及低密度發展的良好特色；
- (b) 避免以「插針式」的模式發展房屋，如安睦街單幢的房屋發展項目，應全盤考慮石門商貿區轉型的整體發展，及早處理當區的交通及社區配套問題。

3. 動議人：趙柱幫 和議人：容溟舟

背景:

沙田是香港人口最多的社區。近年政府已於沙田興建大量公營房屋，以紓緩香港人口的增長。政府在土地發展時，卻未有完善的社區規劃，包括交通配套、康樂設施等等。政府卻視而不見，充耳不聞，漠視民意。

動議:

沙田區議會發展及房屋委員會認為，政府理應先加強公共交通運輸服務及增加社區康體設施，以解決現時沙田居民的需要，包括盡快落實興建現行已規劃的設施，例如增建道路網絡、體育中心、圖書館、學校和診所等。

故此，沙田區議會發展及房屋委員會要求政府在未有完善社區規劃下，避免增建樓宇，令社區設施超出負荷，影響居民生活質素！

**The minutes of the DHC meeting on 3.11.2016 is not yet available. The recording of the meeting (in Chinese) is available on STDC web*

site: http://www.districtcouncils.gov.hk/st/tc_chi/meetings/committees/committee_meetings.php