RURAL AND NEW TOWN PLANNING COMMITTEE
OF THE TOWN PLANNING BOARD

RNTPC Paper No. 6/17

for Consideration by
the Rural and New Town Planning Committee on 28.7.2017

PROPOSED AMENDMENTS TO THE APPROVED TSEUNG KWAN O OUTLINE ZONING PLAN NO. S/TKO/24

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1. Introduction

This paper is to seek Members' agreement that:

(a) the proposed amendments to the approved Tseung Kwan O (TKO) Outline Zoning Plan (OZP) No. S/TKO/24 (**Appendix II**) and its Notes (**Appendix III**) 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 (**Appendix IV**) should be adopted as an expression of the Town Planning Board (the Board)'s planning intentions and objectives for the various land use zonings of the OZP and is suitable for exhibition together with the draft OZP.

2. Status of the Current OZP

2.1 On 14.3.2017, the Chief Executive in Council (CE in C) under section 9(1)(a) of the Ordinance, approved the draft TKO OZP, which was subsequently renumbered as S/TKO/24. On 24.3.2017, the approved TKO OZP No. S/TKO/24 (**Appendix I**) was exhibited for public inspection under section 9(5) of the Ordinance.

2.2 On 27.6.2017, the CE in C referred the approved TKO OZP No. S/TKO/24 to the Board for amendment under section 12(1)(b)(ii) of the Ordinance. On 7.7.2017, the reference back of the OZP was notified in the Gazette under section 12(2) of the Ordinance.

3. Background

3.1 According to the 2013 Policy Address, the Government would adopt a multi-pronged approach to build up land reserve with a view to meeting housing and other development needs. It was reaffirmed in the 2014 Policy Address that the Government would continue to review various land uses and rezone sites as appropriate for residential use. To meet and expedite housing land supply in the short and medium terms, the Government has been carrying out various land use reviews on an on-going basis, including reviews on the government land currently vacant, under Short Term Tenancies or different short-term or government uses, as well as the reviews on "Green Belt" ("GB") sites, with a view to identifying more suitable sites for

conversion to residential use. As stated in the Policy Address 2016, housing is still the most important livelihood issue to be addressed.

3.2 To meet the pressing need for housing land supply, nine sites in Tseung Kwan O **(Plan 1)** have been identified and proposed for rezoning to residential use. The sites are all proposed for public housing developments by the Housing Department (HD). Preliminary Feasibility Study (FS) and technical assessments to support the proposed public housing developments have been conducted by Civil Engineering and Development Department's (CEDD) consultant. According to the findings of the Preliminary FS and technical assessments, it is concluded that there is no insurmountable technical problem for the proposed public housing development in five sites **(Sites 1 to 5 on Plan 1).** It is proposed to rezone the five sites to enable early delivery of housing units while the rezoning of the remaining sites **(Sites 6 to 9 on Plan 1)** would be subject to further study, taking into account the need for additional infrastructure including the proposed East Kowloon Line to support the proposed development, to be conducted by CEDD.

3.3 The five TKO sites proposed to be developed with priority are located at (1) north of Tseung Kwan O Village; (2) northwest of Ying Yip Road; (3) south of Chiu Shun Road; (4) west of Yau Yue Wan Village; and (5) east of Hong Kong Movie City **(Sites 1 to 5 on Plan 1).** These sites are mainly zoned "GB" with minor portion falling within the "Government, Institution or Community" ("G/IC") zone on the TKO OZP. These five sites are proposed to be rezoned to "Residential (Group A)7" ("R(A)7") on the TKO OZP.

3.4 According to the Preliminary FS and technical assessments conducted by CEDD's consultant and HD's indicative schemes and conceptual layouts **(Appendix Va to Ve)**, the proposed housing developments in the 5 sites would provide a total of about 11,260 public housing units to accommodate about 31,530 people.

4. <u>The Amendment Sites</u>

Site 1: North of Tseung Kwan O Village (Plans 1, 2a, 3a, 4a and 5a)

The Site and its Surroundings

4.1 Site 1 (about 3.94 ha) is located to the north of TKO Upper Village and is a vegetated slope covered with natural woodland and plantation with levels ranging from about 30mPD to 100mPD descending towards the south. To the further south of TKO Upper Village is the TKO 400KV substation. The site is zoned "GB" and is government land. A section of the Little Hawaii Trail and some hiking trails fall within the site **(Plan 3a)**. A natural stream is located to the east of the site. There is no existing public access road connecting to the site.

4.2 The site is located at urban fringe of TKO Town. Further southwest is Tseung Kwan O Village. To the further southeast is the high-rise residential developments of Po Lam, which include Po Lam Estate (about 105mPD),

Ying Ming Court (about 107mPD), Well On Garden (about 140mPD) and Serenity Place (about 143mPD) **(Plan 1)**.

Rezoning Proposal

4.3 Site 1 (about 3.94 ha) is proposed to be rezoned from "GB" to "R(A)7" with a maximum plot ratio (PR) of 6.5 and maximum building height (BH) of 180mPD. According to HD's preliminary proposal, the proposed public housing development will provide about 3,700 flats for an estimated population of about 10,360. The conceptual layout for the proposed public housing development under the Preliminary FS is at **Appendix Va**. Since the site is located on a sloping ground at a level higher than other nearby residential developments, a stepped BH profile should be formulated in relation to the topography of TKO Town.

Site 2: Northwest of Ying Yip Road (Plans 1, 2b, 3b, 4b and 5b)

The Site and its Surroundings

4.4 Site 2 (about 1.59 ha) is located to the northwest of Ying Yip Road and Clear Water Bay Film Studio. It is a vegetated slope covered with natural woodland and plantation with levels ranging from about 32mPD to 50mPD descending towards the south. There is a stream running through the site. It is zoned "GB" and is government land.

4.5 The site is located at urban fringe of TKO Town. Further south is the low-rise clusters consisting of Hang Hau Village and Shui Bin Village, various school sites, and the high-rise residential developments of Hang Hau, which includes Fu Ning Garden (about 105mPD) and Yu Ming Court (about 114mPD) **(Plan 1)**.

Rezoning proposal

4.6 Site 2 (about 1.59 ha) is proposed to be rezoned from "GB" to "R(A)7" with a maximum PR of 6.5 and maximum BH of 170mPD. According to HD's preliminary proposal, the proposed public housing development will provide about 1,600 flats for an estimated population of about 4,480. The conceptual layout for the proposed public housing development under the Preliminary FS is at **Appendix Vb.** Since the site is located on a sloping ground at a higher level than other nearby residential developments, a stepped BH profile should be formulated in relation to the topography of TKO Town.

Site 3: South of Chiu Shun Road (Plans 1, 2b, 3c, 4c and 5c)

The Site and its Surroundings

4.7 Site 3 (about 0.46 ha in total) is located to the south of Chiu Shun Road. It is government land. The western part of the site is zoned "GB" (about 0.27 ha) and comprises mainly of existing slope covered with vegetation and the remaining portion falling within the "G/IC" (about 0.19) is currently vacant

and with a large tree located within. To the east and west are Tin Ha Wan Village and MTR Pak Shing Kok Ventilation Building respectively. To the immediate south-east is Drainage Services Department's water tank. To the north and north-west across Chiu Shun Road are the high-rise residential developments of Hang Hau, which includes Yuk Ming Court (about 115mPD), Wo Ming Court (about 101mPD), East Point City (about 143mPD), La Cite Noble (about 146mPD) and Nan Fung Plaza (about 139mPD to 153mPD) **(Plan 1)**.

Rezoning Proposal

4.8 Site 3 (about 0.46 ha) is proposed to be rezoned from "GB" and "G/IC" to "R(A)7" with a maximum PR of 6.5 and maximum BH of 130mPD. According to HD's preliminary proposal, the proposed public housing development will provide about 650 flats for an estimated population of about 1,570. The conceptual layout for the proposed public housing development under the Preliminary FS is at **Appendix Vc.** The proposed BH is generally in line with the neighbouring high-rise residential developments ranging from about 101mPD to 153mPD **(Plan 1)**.

An area adjoining Site 3 (Plans 2b, 3c and 4c)

4.9 Opportunity is taken to rezone the area adjoining Site 3 (about 0.018 ha) at Tin Ha Wan Village from "G/IC" to "Village Type Development" ("V") to reflect the existing village development.

Site 4: West of Yau Yue Wan Village (Plans 1, 2a, 3d, 4d and 5d)

The Site and its Surroundings

4.10 Site 4 (about 2.95 ha) is located to the west of Yau Yue Wan Village and bounded by Po Lam Road North and Yau Yue Wan Village Road. The site is zoned "GB" and is a vegetated slope covered with natural woodland and plantation with levels ranging from about 9mPD to 48mPD. The site is mainly government land and there are two agricultural lots (DD242 431 OSL and DD 242 417 RP OSL) **(Plan 3d)** under private ownership within the site. Land resumption of these two private lots is required for development of the proposed public housing. To the south-west of the site across Po Lam Road North are high-rise residential developments including Ying Ming Court (about 107mPD), Po Lam Estate (about 105mPD) and Well On Garden (about 140mPD) **(Plan 1)**. To the east are the Fire Services Department TKO Rank and Fire Married Quarters, Yau Yue Wan Village, playground, TKO Government Secondary School and TKO Jockey Club Clinic.

Rezoning Proposal

4.11 Site 4 (about 2.95 ha) is proposed to be rezoned from "GB" to "R(A)7" with a maximum PR of 6.5 and maximum BH of 140mPD. According to HD's preliminary proposal, the proposed public housing development will provide about 2,500 flats for an estimated population of about 7,000. The

conceptual layout for the proposed public housing development under the Preliminary FS is at **Appendix Vd.** The proposed BH is generally in line with the neighbouring high-rise residential developments ranging from about 105mPD to 140mPD **(Plan 1)**.

Site 5: East of Hong Kong Movie City (Plans 1, 2c, 3e, 4e and 5e)

The Site and its Surroundings

4.12 Site 5 (about 2.26 ha) is located to the east of Hong Kong Movie City and the south of Pak Shing Kok Road. The site is zoned "GB" and is covered with natural woodland. It is government land. The site falls within the 250m consultation zone of the restored Tseung Kwan O Stage I Landfill **(Plan 3e)**. To the north and northwest of the site are some existing and planned GIC uses including the proposed Chinese Medicine Hospital, the Fire and Ambulance Services Academy and the proposed Fire Services Department Rank and File Quarters. To the further south are high-rise residential developments including The Beaumount (about 141mPD) and the LOHAS Park (about 183mPD to 217mPD) **(Plan 1).**

Rezoning Proposal

4.13 Site 5 (about 2.26 ha) is proposed to be rezoned from "GB" to "R(A)7" with a maximum PR of 6.5 and maximum BH of 210mPD. According to HD's preliminary proposal, the proposed public housing will provide about 2,900 flats for an estimated population of about 8,120. The conceptual layout for the proposed public housing development under the Preliminary FS is at **Appendix Ve.** The proposed BH is generally in line with the nearby high-rise residential developments ranging from about 141mPD to 210mPD.

4.14 A summary of the development parameters and rezoning proposal for the 5 proposed TKO housing sites and an area adjoining Site 3 is attached at **Appendix XII** for easy reference.

5. Technical Assessments for 5 Proposed TKO Housing Sites

5.1 Preliminary FS and technical assessments **(Appendices VIII to XI)** have been conducted by CEDD's consultant to assess the potential impacts arising from the five proposed housing sites on traffic, infrastructure, environmental, ecology, landscape, visual, air ventilation and other aspects. According to the findings of the Preliminary FS, it is concluded that there is no insurmountable technical problem for development of the five proposed housing sites. A domestic PR of 6 and non-domestic PR of 0.5[I] are adopted as a basis for technical assessments. To allow flexibility of the design of the proposed housing developments, a maximum PR of 6.5 is proposed to be stipulated in the OZP.

[I] The domestic and non-domestic PR are based on net site area of the proposed housing sites.

Land Use Compatibility

5.2 The five proposed housing sites are located at the urban fringe of TKO Town. They are in a neighbourhood comprising mainly residential, open space and GIC developments and the proposed public housing developments are generally compatible with the surrounding land uses.

Visual Aspect

5.3 According to the Visual Impact Assessment (VIA) for the five proposed housing developments conducted by CEDD's consultant **(Appendix VIII)**, most of the sites, except the site to the South of Chui Shun Road (Site 3), are situated on steep slope and encountering difficult forms of site constraints. With the development parameters of domestic PR of 6 and non-domestic PR ratio of 0.5 to be achieved, the conceptual building layouts and BHs of the indicative schemes for the five housing sites are considered optimal and the schemes are proposed in consideration to the site context as well as the site formation level. The proposed BHs for the five housing sites generally match with the urban context of TKO. However, the five housing sites would inevitably have significant to slight adverse visual impacts due to blockage of views, loss of openness and degree of visual obstruction. Based on the locations of the proposed public housing developments at the five housing sites, 17 Viewpoints (VP) of the photomontages within the visual envelope are shown in **Appendix VIa**. The overall residual impacts on some short ranged viewpoints including VP12, VP13 and VP18 would be significantly adverse **(Appendices VIe and VIh)**; while some short or medium ranged viewpoints including VP6, VP7, and VP9 would be moderately adverse **(Appendices VIc and VId)**; and some views from longer distance viewpoints including VP3, VP5, VP11, VP14, VP15, VP16, VP17, VP19, VP20, VP21, VP22 would be slightly adverse **(Appendices VIb, VId, VIf to VIj)** after mitigations are implemented. The overall visual impact of the 5 housing sites would be moderately adverse. Mitigation measures such as landscaping, screening, greening measures, building gaps, variation of building heights, open space, building facade, colour and treatments will be further explored at the detailed design stage to further reduce the potential visual impact arising from the proposed public housing developments.

Air Ventilation Aspect

5.4 An Air Ventilation Assessment Expert Evaluation (AVA (EE)) **(Appendix IXa)** has been conducted by CEDD's consultant to assess the wind performance of the proposed public housing developments at Sites 1, 2, 4 and 5, by comparing the existing wind condition and that under the indicative schemes proposed by HD. The AVA (EE) concludes that the proposed developments at Sites 1, 2, 4 and 5 will not pose significant adverse impact to the surrounding environment in terms of air ventilation. Relevant mitigation measures including minimum 15m wide building separations aligning with prevailing wind directions and open space at designated areas are proposed to alleviate the potential impact on the surrounding wind environment induced by the proposed developments. Quantitative AVAs should be carried out at

the detailed design stage to demonstrate that the wind performance of the future schemes is no worse off than the current scheme and for scheme design optimization. Further enhancement features will be considered at the detailed design stage. The proposed public housing developments will be guided by an administrative planning brief. The requirement of the mitigation measures and quantitative AVAs will be incorporated in the planning brief for implementation. Such requirement is also incorporated in the ES of the OZP (paragraph 8.3.11 in **Appendix IV)**. The Chief Town Planner/Urban Design and Landscape, Planning Department (CTP/UD&L, PlanD) has no adverse comment on the AVA (EE).

5.5 For Site 3, with an area of about 0.46ha, a preliminary assessment has been conducted by PlanD **(Appendix IXb).** According to the indicative scheme from HD **(Appendix Vc)**, the proposed development at Site 3 with a single domestic tower at a maximum BH of 130mPD on a proposed low-rise non-domestic podium allowing prevailing wind to skim over would not impose significant impact on the overall pedestrian wind environment. Further enhancement features will be considered at the detailed design stage.

Landscape Aspect

5.6 The five proposed housing sites would involve approximately 17.0 ha of land in total (including the housing sites of about 11.0ha and associated infrastructural works of about 6.0ha). According to the Landscape Assessment (LA) for the five proposed housing sites conducted by CEDD's consultant **(Appendix X)**, the five sites are of upland countryside landscape or urban fringe character. All the sites, except Site 3, are well vegetated with secondary woodland covering about 7.7 ha in total. According to the broad brush tree survey, there are a total of about 15,250 existing trees[II] to be affected, of which 15,090 trees and 160 trees respectively are proposed to be felled and transplanted respectively. Most of the trees identified within the study area (Figure 1.1.1 of **Appendix X**) are common species. There is no registered Old and Valuable Tree (OVT) and no stonewall tree is observed. One important tree (Ficus microcarpa (榕樹)) with diameter of about 2m at Site 3 **(Plans 3c and 5c)** is proposed to be retained. As a result of the proposed housing developments, the overall landscape character will be changed from peaks/upland/hillside landscape character to miscellaneous urban fringe landscape/urban residential landscape.

5.7 As recommended in the LA, various mitigation measures are proposed for alleviating landscape impact. In compensation for the loss of vegetation and affected trees, compensatory tree planting will be adopted within the proposed housing sites (Figures 7.1.2, 7.1.3 and 7.1.6 to 7.1.8 of **Appendix X**). Potential woodland compensation areas (about 8.1ha) (Appendix D of **Appendix X**) have also been preliminarily identified, within which about 25,800 trees are proposed to be planted. Sensitive streetscape design and appropriate roadside planting are recommended at the housing sites to provide subtle transition from the new housing developments to the naturalistic landscape beyond. According to HD, 30% or a minimum 20% green coverage for the public housing developments in accordance with

[II] Existing trees with diameter at breast height larger or equal to 95 mm (DBH ≥ 95mm)

guiding principles on green coverage for public housing development will be achieved. Detailed Tree Preservation and Removal Proposals will be conducted in accordance with Environment, Transport and Works Bureau Technical Circular (Works) No. 29/2004 (ETWB TCW No. 29/2004) and Development Bureau Technical Circular (Works) No. 7/2015 (DEVB TCW No.7/2015) at detailed design stage. According to the LA, it is considered that the residual landscape impacts of the proposed housing sites are considered acceptable with mitigation measures.

5.8 A section of Little Hawaii Trail, which is a popular walking trail in the area, falling within Site 1 will be diverted (Figure 7.1.10 of **Appendix X**). The streams at or near Sites 1 and 2 to be affected will be re-provisioned as green channels (Figures 7.1.10 and 7.1.11 of **Appendix X**).

Traffic Aspect

5.9 A Preliminary Traffic and Transport Impact Assessment (TTIA) has been conducted to assess the traffic and transport impact arising from the five proposed housing developments. The findings of the TTIA are summarized in Chapter 4 of the Final Report of the Preliminary FS **(Appendix XI).**

Road-based Traffic

5.10 At present, TKO Tunnel is the major external connection for TKO area with busy traffic during peak hours. With new developments to be completed progressively, the population of TKO continues to grow, rendering additional traffic load to TKO. The Tseung Kwan O – Lam Tin Tunnel (TKO-LTT) will be a new major connection between TKO and Eastern Kowloon, which will relieve traffic load of TKO Tunnel during peak hours. Construction of TKO-LTT commenced in 2016 for completion in 2021 tentatively. Cross Bay Link (CBL) is planned to link up the eastern part of TKO with TKO-LTT. Subject to funding approval, CBL is planned for completion before the earliest year of population intake of the five housing sites (i.e. 2024). With the implementation of CBL, the traffic condition of TKO Tunnel would be further improved. It is assumed in the TTIA that population intake of the five housing sites would take place in 2024 the earliest. The potential traffic impact arising from the housing sites on the key road links and junctions is analyzed at the year of population intake (i.e. 2024) and 5 years after population intake (i.e. 2029). It is anticipated that road-based external traffic of the five proposed housing developments would mainly use TKO Tunnel and TKO-LTT. Upon commissioning of TKO-LTT and CBL, the traffic model in the TTIA reveals that the volume to capacity (V/C) ratios for TKO Tunnel and TKO-LTT would be 0.92 and 0.85 in 2024 and 0.95 and 0.91 in 2029 respectively (Table 4.2 at Page 9 of the Final Report of Preliminary FS **(Appendix XI**). The TTIA concludes that the development of the 5 sites for residential use is considered technically feasible and will not pose adverse traffic impact to the area with the commissioning of CBL and appropriate traffic mitigation measures including proposed new access road and road improvement works. In view of the above, Commissioner for Transport (C for T) has no adverse comment on the rezoning proposal for the five proposed housing developments from traffic

point of view. A copy of the TTIA is deposited at the meeting for Members' inspection.

5.11 The key traffic mitigation measures proposed in the TTIA are as follows:

Proposed new access road and road improvement works

(a) to facilitate the development of the site to the North of TKO Village (Site 1), a new access road is proposed to connect from the north of Wing Lai Road to Site 1 **(Appendices VIIa and VIIb)**;

(b) to facilitate the development of the site to the northwest of Ying Yip Road (Site 2), widening of Ying Yip Road from 2 lanes to 3 lanes is proposed to provide an additional north bound climbing lane **(Appendices VIIa and VIIc);**

Road junction improvement works

(c) local widening of south bound Po Hong Road from 1 lane to 2 lanes at the signalized junction at Po Hong Road/Po Lam Road North **(Appendices VIIa and VIId)**;

(d) transforming the existing roundabout between Ying Yip Road/Po Ning Road/Sheung Ning Road to a signal-controlled junction, and improving pedestrian crossing facilities with a view to enhancing pedestrian safety **(Appendices VIIa and VIIe);** and

Other Proposed Improvement Schemes

(e) Improvement schemes at Clear Water Bay Road will be investigated and reviewed at detailed design stage.

Railway-based Traffic

5.12 According to the TTIA, the Mass Transit Railway Corporation Limited (MTRCL) has planned to upgrade the signalling system of TKO Line for completion by 2021 tentatively. With the completion of the upgrading of signalling system amongst other railway lines, the overall carrying capacity can be increased by around 10 percent. In addition, Shatin Central Link will serve as the fourth cross-harbour railway line and divert a portion of passengers from other cross-harbour railway lines (including TKO Line) to Shatin Central Link. In the light of the above, it is anticipated that the housing development at the five sites will not pose unacceptable impact to TKO Line.

5.13 Further TTIA will be conducted to comprehensively review the existing traffic and transport conditions in the vicinity of the five proposed housing sites at detailed design stage.

Environmental Aspect

5.14 A preliminary environmental study (PES) has been conducted to assess the environmental impacts arising from the five proposed housing developments on air quality, noise, water quality, waste management, ecology, cultural heritage, land contamination and landfill gas. The findings of the PES are summarized in Chapter 9 of the Final Report of the Preliminary FS **(Appendix XI).** The PES concludes that no insurmountable environmental impact would be anticipated at the sites for housing development. Detailed environmental study will be conducted at detailed design stage to ascertain any potential environmental impacts, including those related to road traffic noise, and formulate the extent and details of the mitigation measures if required. The Director of Environmental Protection (DEP) has no objection to the rezoning proposal for five TKO housing sites. A copy of full set of the PES is deposited at the meeting for Members' inspection.

Preliminary ecological assessment

5.15 The PES covers a preliminary ecological assessment for the proposed housing sites and their surrounding area (500 m from boundary of the housing sites). The PES concludes that the five housing sites do not encroach onto any recognized site of conservation importance. It is anticipated that about 7.7 ha of secondary woodland would be lost as a result of housing development at the five sites. The loss of secondary woodland would be compensated by the replanting of native trees to form woodland of a similar size. The affected flora species and faunal species of conservation importance will be transplanted or translocated to suitable receptor sites. Low residual ecological impacts are anticipated after the implementation of mitigation measures. Detailed ecological survey is required to formulate suitable mitigation measures at detailed design stage. The Director of Agriculture, Fisheries and Conservation Department has no adverse comment on the rezoning proposal.

Preliminary land contamination

5.16 The PES concludes that land contamination is not anticipated at the five housing sites. DEP has no adverse comment on it.

Preliminary landfill gas hazard assessment

5.17 Preliminary landfill gas hazard assessment under the PES concludes that four out of five sites are outside consultation zone of landfill. The site located to the East of Hong Kong Movie City (Site 5) falls within the 250m consultation zone of the restored TKO Stage I Landfill. As recommended by the PES, with appropriate mitigation measures including landfill gas monitoring and active gas extraction system, no adverse impact to the site is anticipated. DEP has no adverse comment on it.

Infrastructural Aspect

5.18 According to the Final Report of Preliminary FS **(Appendix XI)**, the existing public utilities networks have to be extended to the five sites. The

Preliminary FS reveals that the development of the five sites for residential uses are considered technically feasible in terms of water supplies, sewerage, drainage, electricity supply, gas supply and telecommunication. A copy of the Preliminary Drainage and Sewerage Study and Preliminary Water Works and Utilities Study are deposited at the meeting for Members' inspection.

6. G/IC Facilities and Open Space Provisions

6.1 As shown in the summary on existing and planned provision of GIC facilities and open space in TKO at **Appendix XIV**, the existing and planned provision of GIC facilities and open spaces are generally adequate to meet the demand of the overall planned population (including the increase in population from the proposed public housing developments) in TKO in accordance with the requirements of the Hong Kong Planning Standards and Guidelines (HKPSG). However, some GIC facilities, mainly including primary school (-86 classrooms), hospital (-1,013 beds) and clinic/health centre (-1) will be in deficit for the planned population in TKO **(Appendix XIV)**.

Primary School

6.2 The Education Bureau (EDB) advises it is anticipated that there will be surplus supply of public sector primary school places and over-provision of public sector secondary school places in Sai Kung District. It is noted that there are still a number of planned school sites in TKO which are yet to be developed. EDB will keep reviewing the latest population projections in the district, the developments of the housing estates in the territory, as well as the supply and demand of schools places in Sai Kung District, and launch the school building programmes concerned as and when appropriate.

Hospital

6.3 The Food and Health Bureau (FHB) advises that Hospital Authority (HA) has taken into account a number of factors in planning for its services, including the increase of service demand as a result of population growth and demographic changes, advancement of medical technology, manpower availability as well as organisation of services of the clusters and hospitals and the service demand of local community. HA plans its services on cluster basis. Hospitals in the cluster (including the Kowloon East Cluster which covers TKO and other districts) are playing different roles and supplement each other to provide a comprehensive range of services to the residents in the catchment area.

Clinic/Health Centre

6.4 FHB takes into account a number of factors in planning for the provision of public primary care services, including population growth, demographic changes, supply of services and healthcare services utilization pattern, so as to formulate service development plans which better cope with the demand of the community. FHB will continue to closely monitor the service demand in Sai Kung District and will plan and develop the necessary clinic facilities as and when appropriate.

6.5 Relevant government departments would provide GIC facilities serving the local residents in some of the currently proposed public housing developments, whereas the detailed proposals and arrangement would be subject to further discussion with stakeholders and relevant government departments at the detailed design stage.

7. Consultation with District Council

7.1 On 19.4.2017, PlanD and CEDD jointly consulted Sai Kung District Council (SKDC) on the findings of the Preliminary FS on the five proposed housing sites and proposed amendments to the TKO OZP. The SKDC Chairman concluded that members in general object to the submission of the proposed rezoning of the five housing sites to the Town Planning Board for consideration. The major concerns raised by SKDC members are: a) existing transport infrastructures and community facilities are insufficient to support additional housing developments; and b) environmental, ecology, visual and air ventilation impacts arising from the five proposed housing developments. The minutes of the SKDC meeting on 19.4.2017 are at **Appendix XIII**.

7.2 As mentioned in paragraphs 5 and 6 above, the Preliminary FS and relevant technical assessments conducted for the five proposed housing sites have demonstrated that the five proposed housing developments are technically feasible and the provisions of open space and GIC facilities are generally adequate to meet the demand of the planned population (including the increase in population from the proposed public housing developments). Relevant government departments will continue to closely monitor the demand of GIC facilities in Sai Kung District and will plan and develop the necessary facilities as and when appropriate. GIC facilities serving the local residents would also be provided in some of the currently proposed public housing developments.

8. Proposed Amendments to Matters shown on the Plan

The following amendments to the TKO OZP are proposed:

Amendment Item A (about 3.94 ha) **(Plan 2a)**

Rezoning of an area to the north of the Tseung Kwan O Village from "GB" to "R(A)7" with a maximum PR of 6.5 and a maximum BH of 180mPD as stipulated on the Plan.

Amendment Item B (about 1.59 ha) **(Plan 2b)**

Rezoning of an area to the northwest of Ying Yip Road from "GB" to "R(A)7" with a maximum PR of 6.5 and a maximum BH of 170mPD as stipulated on the Plan.

Amendment Item C1 (about 0.46 ha) **(Plan 2b)**

Rezoning of an area to the south of Chiu Shun Road from "GB" and "G/IC" to "R(A)7" with a maximum PR of 6.5 and a maximum BH of 130mPD as stipulated on the Plan.

Amendment Item C2 (about 0.018 ha) **(Plan 2b)**

Rezoning of an area at Tin Ha Wan Village from "G/IC" to "V".

Amendment Item D (about 2.59 ha) **(Plan 2a)**

Rezoning of an area to the west of Yau Yue Wan Village from "GB" to "R(A)7" with a maximum PR of 6.5 and a maximum BH of 140mPD as stipulated on the Plan.

Amendment Item E (about 2.26 ha) **(Plan 2c)**

Rezoning of an area to the east of Hong Kong Movie City from "GB" to "R(A)7" with a maximum PR of 6.5 and a maximum BH of 210mPD as stipulated on the Plan.

9. Proposed Amendment to the Notes of the OZP

9.1 In relation to the **Amendment Items A, B, C1, D and E** as mentioned in paragraph 8 above, the Remarks for "R(A)" zone will be revised to incorporate development restrictions for the "R(A)7" sub-area.

9.2 To tally with the revised Master Schedule of Notes to Statutory Plans (MSN) for "Residential (Group E)" ("R(E)") zone which was agreed by the Town Planning Board on 16.6.2017, it is proposed to incorporate 'Art Studio (excluding those involving direct provision of services or goods)' as a Column 1 use in Schedule II of the "R(E)" zone. As 'Art Studio' is subsumed under 'Place of Recreation, Sports or Culture' use, corresponding amendment will also be made to replace 'Place of Recreation, Sports or Culture' under Column 2 by 'Place of Recreation, Sports or Culture (not elsewhere specified)'.

9.3 The above proposed amendments have been incorporated in the draft Notes at **Appendix III** with addition in ***bold and italic*** and deletion in ~~single crossed out~~ for Members' consideration.

10. Revision to the Explanatory Statement of the OZP

10.1 The ES of the TKO OZP has been revised to reflect the above amendments and to update the general description of various land use zones where appropriate.

10.2 The updated ES (with additions in ***bold and italics*** and deletion in ~~single crossed out~~) is attached at **Appendix IV** for Members' consideration.

11. Plan Number

Upon gazette, the OZP will be renumbered as S/TKO/25.

12. Consultation

Departmental Consultation

12.1 The rezoning proposal has been circulated to the following bureaux/departments for comment. No objection or adverse comments have been received and their comments (if any) have been incorporated into the proposed amendments to the OZP as appropriate.

(a) Secretary for Development;
(b) Secretary for Transport and Housing;
(c) Chief Engineer/ New Territories East Development Office, Civil Engineering and Development Department;
(d) District Lands Officer/Sai Kung, Lands Department;
(e) Chief Planning Officer, Housing Department;
(f) Commissioner for Transport;
(g) Principal Project Coordinator/ Housing Projects 1 Unit, Civil Engineering and Development Department;
(h) District Officer/ Sai Kung, Home Affairs Department;
(i) Secretary for Education;
(j) Director of Environmental Protection;
(k) Chief Building Surveyor/ New Territories East (2) and Rail, Buildings Department;
(l) Chief Engineer/ Mainland South, Drainage Services Department;
(m) Chief Engineer/ Construction, Water Supplies Department;
(n) Commissioner of Police;
(o) Director of Fire Services;
(p) Director of Electrical and Mechanical Services;
(q) Director of Agriculture, Fisheries and Conservation;
(r) Director of Leisure and Cultural Services;
(s) Head of Antiquities and Monuments Office, Director of Leisure and Cultural Services;
(t) Director of Food and Environmental Hygiene;
(u) Director of Social Welfare;
(v) Director of Health;
(w) Chief Highway Engineer/ New Territories East, Highway Department;
(x) Chief Engineer/ Technical Services, Railway Development Office, Highway Department;
(y) Head of Geotechnical Engineering Office, Civil Engineering and Development Department;
(z) Chief Architect/ Central Management Division 2, Architectural Services Department;
(aa) Government Property Administrator; and
(bb) Chief Town Planner/ Urban Design and Landscape, Planning Department.

Public Consultation

12.2 As mentioned in paragraph 7.1 above, the SKDC was consulted on 19.4.2017 on the findings of the Preliminary FS on the five proposed housing sites and proposed amendments to the TKO OZP. The SKDC will be consulted during the exhibition period of the draft TKO OZP No. S/TKO/25 for public inspection under section 5 of the Ordinance.

13. Decision Sought

Members are invited to:

(a) agree that the proposed amendments to the approved Tseung Kwan O OZP No. S/TKO/24 as shown on the draft Tseung Kwan O OZP No. S/TKO/24A at **Appendix II** (to be renumbered as S/TKO/25 upon exhibition) and the draft Notes at **Appendix III** are suitable for exhibition for public inspection under section 5 of the Ordinance; and

(b) adopt the revised ES at **Appendix IV** for the draft Tseung Kwan O OZP No. S/TKO/24A (to be renumbered as S/TKO/25) as an expression of the planning intention and objectives of the Board for various land use zonings on the OZP and agree that the revised ES is suitable for exhibition together with the draft OZP.

14. Attachments

Appendix I	Approved Tseung Kwan O OZP No. S/TKO/24 (reduced scale)
Appendix II	Draft Tseung Kwan O OZP No. S/TKO/24A
Appendix III	Schedule of Amendments and revised Notes of Draft Tseung Kwan O OZP No. S/TKO/24A
Appendix IV	Revised Explanatory Statement of Draft Tseung Kwan O OZP No. S/TKO/24A
Appendices Va to Ve	Conceptual layout plan of the proposed public housing sites
Appendices VIa to VIj	Viewpoints and photomontages of the 5 TKO housing sites
Appendices VIIa to VIIe	Key traffic mitigation measures for 5 TKO housing sites
Appendix VIII	Visual Impact Assessment for 5 TKO housing sites
Appendix IXa and IXb	Air Ventilation Assessment (Expert Evaluation) for 5 TKO housing sites and PlanD's preliminary AVA assessment for the site to the South of Chi Shun Road (Site 3)
Appendix X	Landscape Assessment for 5 TKO housing sites

Appendix XI	Final Report of the Feasibility Study for 5 TKO housing sites
Appendix XII	Summary of the development parameters and rezoning proposal for 5 TKO housing sites and an area adjoining Site 3
Appendix XIII	Minutes of the SKDC special meeting on 19.4.2017
Appendix XIV	Provision of Major Community Facilities and Open Space in Tseung Kwan O
Plan 1	Location Plan for TKO potential housing sites
Plans 2a to 2c	Proposed amendments to the approved TKO OZP No. S/TKO/24
Plan 3a to 3e	Site Plans
Plans 4a to 4e	Aerial Photos
Plans 5a to 5e	Site Photos

PLANNING DEPARTMENT
JULY 2017

圖例
NOTATION

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

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

MISCELLANEOUS		其他
BOUNDARY OF PLANNING SCHEME		規劃範圍界線
PLANNING AREA NUMBER	(1)	規劃區編號
BOUNDARY OF COUNTRY PARK		郊野公園界線
PETROL FILLING STATION	P F S	加油站

土地用途及面積一覽表
SCHEDULE OF USES AND AREAS

USES	大約面積及百分率 APPROXIMATE AREA & % 公頃 HECTARES	% 百分率	用途
COMPREHENSIVE DEVELOPMENT AREA	38.72	2.25	綜合發展區
COMMERCIAL / RESIDENTIAL	20.07	1.17	商業 / 住宅
RESIDENTIAL (GROUP A)	144.97	8.44	住宅（甲類）
RESIDENTIAL (GROUP B)	4.49	0.26	住宅（乙類）
RESIDENTIAL (GROUP C)	0.66	0.04	住宅（丙類）
RESIDENTIAL (GROUP E)	4.00	0.23	住宅（戊類）
VILLAGE TYPE DEVELOPMENT	22.01	1.28	鄉村式發展
GOVERNMENT, INSTITUTION OR COMMUNITY	142.77	8.31	政府、機構或社區
OPEN SPACE	190.80	11.10	休憩用地
RECREATION	65.85	3.83	康樂
OTHER SPECIFIED USES	225.69	13.13	其他指定用途
GREEN BELT	760.13	44.23	綠化地帶
RAILWAY	4.87	0.28	鐵路
MAJOR ROAD ETC.	93.55	5.45	主要道路等
TOTAL PLANNING SCHEME AREA	1718.58	100.00	規劃範圍總面積

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

行政長官會同行政會議於２０１７年３月１４日 根據城市規劃條例第９（１）（ａ）條核准的圖則
APPROVED BY THE CHIEF EXECUTIVE IN COUNCIL UNDER SECTION 9(1)(a) OF THE TOWN PLANNING ORDINANCE ON 14 MARCH 2017

Ms Kinnie WONG 黃潔怡女士
CLERK TO THE EXECUTIVE COUNCIL 行政會議秘書

香港城市規劃委員會依據城市規劃條例擬備的將軍澳分區計劃大綱圖
TOWN PLANNING ORDINANCE, HONG KONG TOWN PLANNING BOARD
TSEUNG KWAN O - OUTLINE ZONING PLAN

SCALE 比例尺
※ METRES 250 0 500 1 000 1 500 METRES ※

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

圖則編號 PLAN No. S/TKO/24

Appendix I

842500E
822500N
N
香港科技大學
The Hong Kong University of Science and Technology
牛尾海
NGAU MEI HOI (PORT SHELTER)
銀線灣
NGAN SIN WAN (SILVERSTRAND)
將軍澳
TSEUNG KWAN O (JUNK BAY)
清水灣半島
CLEAR WATER BAY PENINSULA
清水灣郊野公園
CLEAR WATER BAY COUNTRY PARK
鯉魚門
LEI YUE MUN
813500N

圖例
NOTATION

ZONES 地帶

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

COMMUNICATIONS 交通

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

MISCELLANEOUS 其他

BOUNDARY OF PLANNING SCHEME		規劃範圍界線
PLANNING AREA NUMBER	(1)	規劃區編號
BOUNDARY OF COUNTRY PARK		郊野公園界線
MAXIMUM BUILDING HEIGHT (IN METRES ABOVE PRINCIPAL DATUM)	210	最高建築物高度（在主水平基準上若干米）
PETROL FILLING STATION	P F S	加油站

土地用途及面積一覽表
SCHEDULE OF USES AND AREAS

USES 用途	APPROXIMATE AREA & % 大約面積及百分率 公頃 HECTARES	% 百分率
COMPREHENSIVE DEVELOPMENT AREA 綜合發展區	38.72	2.25
COMMERCIAL / RESIDENTIAL 商業 / 住宅	20.07	1.17
RESIDENTIAL (GROUP A) 住宅（甲類）	156.17	9.09
RESIDENTIAL (GROUP B) 住宅（乙類）	4.49	0.26
RESIDENTIAL (GROUP C) 住宅（丙類）	0.66	0.04
RESIDENTIAL (GROUP E) 住宅（戊類）	4.00	0.23
VILLAGE TYPE DEVELOPMENT 鄉村式發展	22.03	1.28
GOVERNMENT, INSTITUTION OR COMMUNITY 政府、機構或社區	142.56	8.30
OPEN SPACE 休憩用地	190.80	11.10
RECREATION 康樂	65.85	3.83
OTHER SPECIFIED USES 其他指定用途	225.69	13.13
GREEN BELT 綠化地帶	749.12	43.59
RAILWAY 鐵路	4.87	0.28
MAJOR ROAD ETC. 主要道路等	93.55	5.45
TOTAL PLANNING SCHEME AREA 規劃範圍總面積	1718.58	100.00

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/TKO/24 的修訂
AMENDMENTS TO APPROVED PLAN No. S/TKO/24

AMENDMENTS EXHIBITED UNDER SECTION 5 OF THE TOWN PLANNING ORDINANCE	按照城市規劃條例第 5 條展示的修訂
AMENDMENT ITEM A	修訂項目 A 項
AMENDMENT ITEM B	修訂項目 B 項
AMENDMENT ITEM C1	修訂項目 C 1 項
AMENDMENT ITEM C2	修訂項目 C 2 項
AMENDMENT ITEM D	修訂項目 D 項
AMENDMENT ITEM E	修訂項目 E 項

（參看附表）
(SEE ATTACHED SCHEDULE)

香港城市規劃委員會依據城市規劃條例擬備的將軍澳分區計劃大綱圖
TOWN PLANNING ORDINANCE, HONG KONG TOWN PLANNING BOARD
TSEUNG KWAN O - OUTLINE ZONING PLAN

SCALE 1 : 10 000 比例尺

米 METRES 250 0 500 1 000 1 500 METRES 米

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

圖則編號 PLAN No. S/TKO/24A

SCHEDULE OF AMENDMENTS TO THE APPROVED TSEUNG KWAN O OUTLINE ZONING PLAN NO. S/TKO/24 MADE BY THE TOWN PLANNING BOARD UNDER THE TOWN PLANNING ORDINANCE (Chapter 131)

I. Amendments to Matters shown on the Plan

Item A – Rezoning of an area to the north of Tseung Kwan O Village from "Green Belt" ("GB") to "Residential (Group A)7" ("R(A)7") with stipulation of building height restriction.

Item B – Rezoning of an area to the northwest of Ying Yip Road from "GB" to "R(A)7" with stipulation of building height restriction.

Item C1 – Rezoning of an area to the south of Chiu Shun Road from "GB" and "Government, Institution or Community" ("G/IC") to "R(A)7" with stipulation of building height restriction.

Item C2 – Rezoning of an area at Tin Ha Wan Village from "G/IC" to "Village Type Development" ("V").

Item D – Rezoning of an area to the west of Yau Yue Wan Village from "GB" to "R(A)7" with stipulation of building height restriction.

Item E – Rezoning of an area to the east of Hong Kong Movie City from "GB" to "R(A)7" with stipulation of building height restriction.

II. Amendments to the Notes of the Plan

a) Revision of the Remarks of the "Residential (Group A)" zone to incorporate development restrictions for the new "R(A)7" sub-area.

b) Incorporation of 'Art Studio (excluding those involving direct provision of services or goods)' as a Column 1 use in Schedule II of the "Residential (Group E)" ("R(E)") zone, and corresponding amendment to replace 'Place of Recreation, Sports or Culture' use under Column 2 in the same schedule by 'Place of Recreation, Sports or Culture (not elsewhere specified)'.

~~APPROVED~~ *DRAFT* TSEUNG KWAN O OUTLINE ZONING PLAN NO. S/TKO/24*A*

(Being ~~*an Approved Plan*~~ ***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 planning 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* TSEUNG KWAN O OUTLINE ZONING PLAN NO. S/TKO/24*A*

Schedule of Uses

	Page
Comprehensive Development Area	1
Commercial/Residential	4
Residential (Group A)	5
Residential (Group B)	8
Residential (Group C)	9
Residential (Group E)	11
Village Type Development	16
Government, Institution or Community	18
Open Space	20
Recreation	22
Other Specified Uses	23
Green Belt	32

COMPREHENSIVE DEVELOPMENT AREA

Column 1 Uses always permitted	Column 2 Uses that may be permitted with or without conditions on application to the Town Planning Board
	Ambulance Depot Commercial Bathhouse/Massage Establishment Eating Place Educational Institution Exhibition or Convention Hall Flat Government Refuse Collection Point Government Use (not elsewhere specified) Hospital Hotel House Information Technology and Telecommunications Industries Institutional Use (not elsewhere specified) Library Market Off-course Betting Centre Office Petrol Filling Station Pier 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 Research, Design and Development Centre Residential Institution School Shop and Services Social Welfare Facility Training Centre Utility Installation for Private Project

(Please see next page)

COMPREHENSIVE DEVELOPMENT AREA (cont'd)

Planning Intention

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

Remarks

(a) Pursuant to section 4A(2) of the Town Planning Ordinance, and except as otherwise expressly provided that it is not required by the Town Planning Board, an applicant for permission for development on land designated "Comprehensive Development Area" 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 landscape and urban design proposals within the area;

(vi) programmes of development in detail;

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

(viii) a 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.

(Please see next page)

COMPREHENSIVE DEVELOPMENT AREA (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) On land designated "Comprehensive Development Area" in Area 86, no new development, or addition, alteration and/or modification to or redevelopment of an existing building shall result in a total development and/or redevelopment in excess of a maximum domestic gross floor area of 1,612,800m^2 and a maximum non-domestic gross floor area of 40,000m^2.

(d) On land designated "Comprehensive Development Area" in Area 92, 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 15,700m^2 and a maximum building height of 6 storeys over one level of carport.

(e) 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, caretaker's office and caretaker's quarters, or recreational facilities for the use and benefit of all the owners or occupiers of the domestic building or domestic part of the building, provided such uses and facilities are ancillary and directly related to the development or redevelopment, may be disregarded. Any floor space that is constructed or intended for use solely as public transport facilities or GIC facilities, as required by the Government, may also be disregarded.

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

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

COMMERCIAL / RESIDENTIAL

Column 1 Uses always permitted	Column 2 Uses that may be permitted with or without conditions on application to the Town Planning Board
Ambulance Depot Eating Place Educational Institution (in a commercial building or in the purpose-designed non-residential portion@ of an existing building only) Exhibition or Convention Hall Flat Government Use (not elsewhere specified) Hotel House Information Technology and Telecommunications Industries Library Market 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 (not elsewhere specified) Social Welfare Facility Training Centre Utility Installation for Private Project Wholesale Trade	Broadcasting, Television and/or Film Studio Commercial Bathhouse/Massage Establishment Educational Institution (not elsewhere specified) Government Refuse Collection Point Hospital Institutional Use (not elsewhere specified) Petrol Filling Station Public Convenience Recyclable Collection Centre Religious Institution School (not elsewhere specified) Shop and Services (Motor Vehicle Showroom only)

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

Planning Intention

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

RESIDENTIAL (GROUP A)

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

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

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

(Please see next page)

RESIDENTIAL (GROUP A) (cont'd)

Planning Intention

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

Remarks

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

Sub-area		Maximum Domestic Plot Ratio	Maximum Non- Domestic Plot Ratio	Maximum Site Coverage (excluding basement(s))	Maximum Building Height (metres above Principal Datum)
R(A)1		5.5	0.5	-	138
R(A)2		5	0.5	50%	100
R(A)3		4	0.5	50%	100
R(A)4	Area (a)	3	0.5	50%	65
	Area (b)	3	0.5	50%	35
R(A)5		3	0.5	50%	65
R(A)6	Area (a)	2	0.5	50%	50
	Area (b)	2	0.5	50%	35
	Area (c)	2	0.5	50%	60

(b) On land designated "R(A)7", no new development, or addition, alteration and/or modification to or redevelopment of an existing building shall result in a total development and/or redevelopment in excess of a maximum plot ratio of 6.5 and a maximum building height in terms of metres above Principal Datum as stipulated on the Plan, or the plot ratio and height of the existing building, whichever is the greater.

~~*(b)*~~***(c)*** On land designated "R(A)3" in Area 65, a public open space of not less than 4,600m^2 shall be provided in the southern portion and at the street level.

(Please see next page)

RESIDENTIAL (GROUP A) (cont'd)

Remarks (cont'd)

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

~~*(d)*~~***(e)*** In determining the maximum site coverage 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, caretaker's office and caretaker's quarters, or recreational facilities for the use and benefit of all the owners or occupiers of the domestic building or domestic part of the building, shall be included for calculation.

~~*(e)*~~***(f)*** 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***s*** (a) ***and (b)*** above and minor adjustment to the boundaries of Areas (a)/(b) of "R(A)4" and/or Areas (a)/(b)/(c) of "R(A)6" as shown on the Plan may be considered by the Town Planning Board on application under section 16 of the Town Planning Ordinance.

RESIDENTIAL (GROUP B)

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

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.

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.

(Please see next page)

RESIDENTIAL (GROUP C) (cont'd)

Remarks

(a) No new development, or addition, alteration and/or modification to or redevelopment of an existing building shall result in a total development and/or redevelopment in excess of 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:

Sub-area	Maximum Plot Ratio	Maximum Site Coverage	Maximum Building Height
R(C)1	0.6	30%	2 storeys over one level of carport

(b) In determining the maximum plot ratio and site coverage 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, caretaker's office and caretaker's quarters, or recreational facilities for the use and benefit of all the owners or occupiers of the domestic building or domestic part of the building, provided such uses and facilities are ancillary and directly related to the development or redevelopment, may be disregarded.

(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.

RESIDENTIAL (GROUP E)

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

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

Ambulance Depot
Government Use (not elsewhere specified)
Public Transport Terminus or Station (excluding open-air terminus or station)
Utility Installation for Private Project

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

(Please see next page)

RESIDENTIAL (GROUP E) (cont'd)

Column 1 Uses always permitted	Column 2 Uses that may be permitted with or without conditions on application to the Town Planning Board
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) Library Off-course Betting Centre Office Place of Entertainment Place of Recreation, Sports or Culture Private Club Public Clinic Public Convenience Recyclable Collection Centre School Shop and Services Social Welfare Facility Training Centre	

(Please see next page)

RESIDENTIAL (GROUP E) (cont'd)

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

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

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

(Please see next page)

RESIDENTIAL (GROUP E) (cont'd)

Column 1 Uses always permitted	Column 2 Uses that may be permitted with or without conditions on application to the Town Planning Board
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) 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 respectively as approved by the Building Authority.

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

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

(Please see next page)

RESIDENTIAL (GROUP E) (cont'd)

Planning Intention

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

Remarks

(a) No new development, or addition, alteration and/or modification to or redevelopment of an existing building shall result in a total development and/or redevelopment in excess of a maximum plot ratio of 5.0 and a maximum building height of 130m.

(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, caretaker's office and caretaker's quarters, or recreational facilities for the use and benefit of all the owners or occupiers of the domestic building or domestic part of the building, provided such uses and facilities are ancillary and directly related to the development or redevelopment, may be disregarded. Any floor space that is constructed or intended for use solely as public vehicle park and public transport facilities, as required by the Government, may also be disregarded.

(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 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 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 Public Clinic Public Convenience Public Transport Terminus or Station Public Utility Installation# Public Vehicle Park (excluding container vehicle) Religious Institution (not elsewhere specified)# Residential Institution# School# Shop and Services Social Welfare Facility# Utility Installation for Private Project
In addition, the following uses are always permitted on the ground floor of a New Territories Exempted House:	
Eating Place Library School Shop and Services	

(Please see next page)

VILLAGE TYPE DEVELOPMENT (cont'd)

Planning Intention

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

Remarks

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

GOVERNMENT, INSTITUTION OR COMMUNITY

Column 1 Uses always permitted	Column 2 Uses that may be permitted with or without conditions on application to the Town Planning Board
Ambulance Depot	Animal Boarding Establishment
Animal Quarantine Centre (in Government building only)	Animal Quarantine Centre (not elsewhere specified)
Broadcasting, Television and/or Film Studio	Columbarium
Cable Car Route and Terminal Building	Correctional Institution
Eating Place (Canteen, Cooked Food Centre only)	Crematorium
Educational Institution	Driving School
Exhibition or Convention Hall	Eating Place (not elsewhere specified)
Field Study/Education/Visitor Centre	Flat
Government Refuse Collection Point	Funeral Facility
Government Use (not elsewhere specified)	Holiday Camp
Hospital	Hotel
Information Technology and Telecommunications Industries (within "G/IC(9)" only)	House
Institutional Use (not elsewhere specified)	Marine Fuelling Station
Library	Off-course Betting Centre
Market	Office
Pier	Petrol Filling Station
Place of Recreation, Sports or Culture	Place of Entertainment
Public Clinic	Private Club
Public Convenience	Radar, Telecommunications Electronic Microwave Repeater, Television and/or Radio Transmitter Installation
Public Transport Terminus or Station	Refuse Disposal Installation (Refuse Transfer Station only)
Public Utility Installation	Residential Institution
Public Vehicle Park (excluding container vehicle)	Sewage Treatment/Screening Plant
Recyclable Collection Centre	Shop and Services
Religious Institution	Utility Installation for Private Project
Research, Design and Development Centre	Zoo
Rural Committee/Village Office	
School	
Service Reservoir	
Social Welfare Facility	
Training Centre	
Wholesale Trade	

(Please see next page)

GOVERNMENT, INSTITUTION OR COMMUNITY (cont'd)

Planning Intention

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

Remarks

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

Sub-area		Maximum Building Height
G/IC(1)		75m
G/IC(2)		55m
G/IC(3)		45m
G/IC(4)		40m
G/IC(5)		10m
G/IC(6)		5m
G/IC(7)	Area (a)	100mPD, except a fire services rescue training tower up to 114mPD
	Area (b)	120mPD
G/IC(8)		106mPD
G/IC(9)		60mPD, except a communications tower up to 76mPD

(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.

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 Library (within "O(1)" only) Park and Garden Pavilion Pedestrian Area Place of Recreation, Sports or Culture (within "O(1)" only) 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 (not elsewhere specified) 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.

OPEN SPACE (2)

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 Landfill 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 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 after the decommissioning and restoration of the landfill site, while permitting landfill use in the interim.

RECREATION

Column 1 Uses always permitted	Column 2 Uses that may be permitted with or without conditions on application to the Town Planning Board
Agricultural Use Field Study/Education/Visitor Centre Government Use (Police Reporting Centre only) Holiday Camp Picnic Area Place of Recreation, Sports or Culture Public Convenience Tent Camping Ground	Animal Boarding Establishment Broadcasting, Television and/or Film Studio Eating Place Golf Course Government Refuse Collection Point Government Use (not elsewhere specified) Marina Pier Place of Entertainment Private Club Public Utility Installation Public Vehicle Park (excluding container vehicle) Residential Institution Shop and Services Theme Park Utility Installation for Private Project Zoo

Planning Intention

This zone is intended primarily for recreational developments for the use of the general public. It encourages the development of active and/or passive recreation and tourism/eco-tourism. Uses in support of the recreational developments may be permitted 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 a maximum plot ratio of 0.1 and a maximum building height of 1 storey, or the plot ratio and 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 plot ratio/building height restrictions stated in paragraph (a) above may be considered by the Town Planning Board on application under section 16 of the Town Planning Ordinance.

OTHER SPECIFIED USES

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

For "Commercial Development with Public Transport Interchange" Only

Ambulance Depot
Commercial Bathhouse/Massage Establishment
Eating Place
Educational Institution
Exhibition or Convention Hall
Government Use (not elsewhere specified)
Hotel
Information Technology and Telecommunications Industries
Institutional Use (not elsewhere specified)
Library
Off-course Betting Centre
Office
Place of Entertainment
Place of Recreation, Sports or Culture
Private Club
Public Clinic
Public Convenience
Public Transport Terminus or Station
Public Utility Installation
Public Vehicle Park (excluding container vehicle)
Recyclable Collection Centre
Religious Institution
School
Shop and Services
Social Welfare Facility
Training Centre
Utility Installation for Private Project
Wholesale Trade

Broadcasting, Television and/or Film Studio
Flat
Government Refuse Collection Point
Hospital
Petrol Filling Station
Residential Institution

Planning Intention

This zone is intended primarily for commercial developments, which may include uses such as office, shop and services, place of entertainment, eating place and hotel, with public transport interchange facilities serving as a major employment node and a commercial**,** retail and entertainment centre for the New Town as well as for Sai Kung hinterland.

(Please see next page)

OTHER SPECIFIED USES (cont'd)

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

For "Commercial/Residential Development with Public Transport Interchange" Only

Ambulance Depot
Eating Place
Educational Institution
(in a commercial building or in the purpose-designed non-residential portion[@] of an existing building only)
Exhibition or Convention Hall
Flat
Government Use (not elsewhere specified)
Hotel
House
Information Technology and Telecommunications Industries
Library
Market
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 (not elsewhere specified)
Social Welfare Facility
Training Centre
Utility Installation for Private Project
Wholesale Trade

Broadcasting, Television and/or Film Studio
Commercial Bathhouse/Massage Establishment
Educational Institution (not elsewhere specified)
Government Refuse Collection Point
Hospital
Institutional Use (not elsewhere specified)
Petrol Filling Station
Public Convenience
Recyclable Collection Centre
Religious Institution
School (not elsewhere specified)
Shop and Services (Motor Vehicle Showroom only)

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

(Please see next page)

OTHER SPECIFIED USES (cont'd)

For "Commercial/Residential Development with Public Transport Interchange" Only (cont'd)

Planning Intention

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

(Please see next page)

OTHER SPECIFIED USES (cont'd)

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

For "Sports and Recreation Club" Only

Place of Recreation, Sports or Culture Private Club	Eating Place Government Refuse Collection Point Government Use (not elsewhere specified) Public Vehicle Park (excluding container vehicle) Shop and Services Social Welfare Facility Utility Installation for Private Project

Planning Intention

This zone is intended primarily to reserve land for water sports and recreation facilities.

Remarks

(a) No new development, or addition, alteration and/or modification to or redevelopment of an existing building shall result in a total development and/or redevelopment in excess of a maximum plot ratio of 0.5, a maximum site coverage of 50% and a maximum building height of 1 storey, or the plot ratio, site coverage and 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 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.

(Please see next page)

OTHER SPECIFIED USES (cont'd)

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

For "Industrial Estate" Only

Ambulance Depot
Broadcasting, Television and/or Film Studio
Cargo Handling and Forwarding Facility
Dangerous Goods Godown
Eating Place
Gas Works
Government Refuse Collection Point
Government Use (not elsewhere specified)
Industrial Use
Information Technology and Telecommunications Industries
Marine Fuelling Station
Office
Petrol Filling Station
Pier
Private Club
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
Refuse Disposal Installation
Research, Design and Development Centre
Shop and Services
Social Welfare Facility (excluding those involving residential care)
Training Centre
Utility Installation for Private Project
Warehouse (excluding Dangerous Goods Godown)
Wholesale Trade

Electric Power Station
Off-course Betting Centre
Offensive Trades
Oil Depot, Oil Refinery and Petro-chemical Plant
Place of Recreation, Sports or Culture
Service Industries (not elsewhere specified)

Planning Intention

This zone is intended primarily to provide/reserve land for the development of an industrial estate for industries to be admitted by the Hong Kong Science and Technology Parks Corporation according to the criteria set by the Corporation. Industries to be included would normally not be accommodated in conventional industrial buildings because of their specific requirements.

(Please see next page)

OTHER SPECIFIED USES (cont'd)

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

For "Deep Waterfront Industry" Only

Ambulance Depot
Cargo Handling and Forwarding Facility
Eating Place (Canteen, Cooked Food Centre only)
Government Refuse Collection Point
Government Use (not elsewhere specified)
Industrial Use (Motor-vehicle Assembly Plant, Paint Manufacturing, Service Trades, Steel Works only)
Information Technology and Telecommunications Industries
Marine Fuelling Station
Open Storage of Construction Materials
Open Storage of Cement/Sand
Petrol Filling Station
Pier
Public Convenience
Public Transport Terminus or Station
Public Utility Installation
Public Vehicle Park (excluding container vehicle)
Recyclable Collection Centre
Research, Design and Development Centre
Refuse Disposal Installation
Ship-building, Ship-breaking and Ship-repairing Yard
Utility Installation for Private Project
Warehouse (excluding Dangerous Goods Godown)

Asphalt Plant/Concrete Batching Plant
Container Storage/Repair Yard
Container Vehicle Park/Container Vehicle Repair Yard
Dangerous Goods Godown
Eating Place (not elsewhere specified)
Electric Power Station
Gas Works
Industrial Use (not elsewhere specified)
Off-course Betting Centre
Office
Oil Depot, Oil Refinery and Petro-chemical Plant
Place of Recreation, Sports or Culture
Private Club
Shop and Services
Social Welfare Facility
Training Centre
Wholesale Trade

Planning Intention

This zone is intended primarily for special industries which require marine access, access to deep water berths or water frontage. Industries to be accommodated within this zone are usually capital intensive, land-intensive and cannot be accommodated in conventional industrial buildings.

(Please see next page)

OTHER SPECIFIED USES (cont'd)

Column 1 Uses always permitted	Column 2 Uses that may be permitted with or without conditions on application to the Town Planning Board
For "Desalination Plant" Only	
Desalination Plant Pier	Government Use Utility Installation not ancillary to the Specified Use

Planning Intention

This zone is intended primarily for the development of a desalination plant to provide fresh water serving the needs of the community.

(please see next page)

OTHER SPECIFIED USES (cont'd)

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

For "Cemetery" Only

Columbarium	Place of Recreation, Sports or Culture
Crematorium	Public Transport Terminus or Station
Funeral Facility	Public Utility Installation
Government Use (not elsewhere specified)	Religious Institution
Grave	Shop and Services (Retail Shop only)
Public Convenience	Utility Installation for Private Project

Planning Intention

This zone is intended primarily for the provision of land for cemetery use serving the needs of the community.

For "Petrol Filling Station" Only

Petrol Filling Station	Government Use Public Utility Installation Workshop (Vehicle Repair Workshop only)

Planning Intention

This zone is intended primarily for the provision of petrol filling station serving the needs of the community.

(Please see next page)

OTHER SPECIFIED USES

Column 1 Uses always permitted	Column 2 Uses that may be permitted with or without conditions on application to the Town Planning Board
For "Pier" Only	
Government Use Pier	Eating Place Marine Fuelling Station Shop and Services Utility Installation for Private Project

Planning Intention

This zone is primarily intended for the provision of pier for recreation and pleasure vessels and tourism to serve the needs of the community and to enhance the recreation and tourism potential of the area.

Remarks

Kiosks not greater than $10m^2$ each in area and not more than 10 in number for uses as shop and services are considered as ancillary to "pier" use.

For "Ventilation Building" only	
Ventilation Building	Government Use Utility Installation not ancillary to the Specified Use

Planning Intention

This zone is intended primarily for the development of ventilation building.

For All Other Sites (Not Listed Above)	
As Specified on the Plan	Government Use Utility Installation not ancillary to the Specified Use

Planning Intention

These zones are intended primarily to provide land for the specified use serving the specific needs of the community.

GREEN BELT

Column 1 Uses always permitted	Column 2 Uses that may be permitted with or without conditions on application to the Town Planning Board
Agricultural Use Barbecue Spot Government Use (Police Reporting Centre only) Nature Reserve Nature Trail On-Farm Domestic Structure Picnic Area Public Convenience Tent Camping Ground Wild Animals Protection Area	Animal Boarding Establishment Broadcasting, Television and/or Film Studio 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) 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 Rural Committee/Village Office School Service Reservoir Social Welfare Facility Utility Installation for Private Project Zoo

Planning Intention

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

DRAFT ~~APPROVED~~* TSEUNG KWAN O OUTLINE ZONING PLAN NO. S/TKO/24*A

EXPLANATORY STATEMENT

EXPLANATORY STATEMENT

~~*APPROVED*~~ *DRAFT* TSEUNG KWAN O OUTLINE ZONING PLAN NO. S/TKO/24*A*

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DRAFT ~~APPROVED~~ **TSEUNG KWAN O OUTLINE ZONING PLAN NO. S/TKO/24*A***

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

EXPLANATORY STATEMENT

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

1. INTRODUCTION

This Explanatory Statement is intended to assist an understanding of the ~~*approved*~~ ***draft*** Tseung Kwan O Outline Zoning Plan (OZP) No. S/TKO/24***A***. 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 11 December 1992, the draft Tseung Kwan O OZP No. S/TKO/1, the first statutory plan covering the Tseung Kwan O area, was gazetted under section 5 of the Town Planning Ordinance (the Ordinance). The OZP was subsequently amended twice.

2.2 On 16 July 1996, the then Governor in Council, under section 9(1)(a) of the Ordinance, approved the draft Tseung Kwan O OZP, which was subsequently renumbered as S/TKO/4. On 4 November 1997, the Chief Executive in Council (CE in C) referred the approved OZP No. S/TKO/4 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.

2.3 On 9 February 1999, the CE in C, under section 9(1)(a) of the Ordinance, approved the draft Tseung Kwan O OZP, which was subsequently renumbered as S/TKO/6. On 20 July 1999, the CE in C referred the approved OZP No. S/TKO/6 to the Board for amendment under section 12(1)(b)(ii) of the Ordinance. The OZP was subsequently amended three times and exhibited for public inspection under section 7 or 12(3) of the Ordinance.

2.4 On 15 May 2001, the CE in C, under section 9(1)(a) of the Ordinance, approved the draft Tseung Kwan O OZP, which was subsequently renumbered as S/TKO/10. On 25 September 2001, the CE in C referred the approved OZP No. S/TKO/10 to the Board for amendment under section 12(1)(b)(ii) of the Ordinance. The OZP was subsequently amended twice and exhibited for public inspection under section 5 or 7 of the Ordinance.

2.5 On 17 December 2002, the CE in C, under section 9(1)(a) of the Ordinance, approved the draft Tseung Kwan O OZP, which was subsequently renumbered as S/TKO/13. On 8 July 2003, the CE in C referred the approved OZP No. S/TKO/13 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.

2.6 On 2 November 2004, the CE in C, under section 9(1)(a) of the Ordinance, approved the draft Tseung Kwan O OZP, which was subsequently renumbered as S/TKO/15. On 30 May 2006, the CE in C referred the approved OZP No. S/TKO/15 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 to reflect the relevant recommendations of the Feasibility Study for Further Development of Tseung Kwan O (the Study).

2.7 On 2 June 2009, the CE in C, under section 9(1)(a) of the Ordinance, approved the draft Tseung Kwan O OZP, which was subsequently renumbered as S/TKO/17. On 1 December 2009, the Secretary for Development (SDEV), under the delegated authority of the Chief Executive (CE), directed the Board under section 3(1)(a) of the Ordinance to extend the planning scheme boundary of the Tseung Kwan O OZP to cover a piece of land proposed to be excised from the Clear Water Bay Country Park (CWBCP) for the proposed South East New Territories Landfill Extension. On 2 February 2010, the CE in C referred the approved OZP No. S/TKO/17 to the Board for amendment under section 12(1)(b)(ii) of the Ordinance. The OZP was subsequently amended twice, including the exclusion of about 5 ha of CWBCP land from the planning scheme boundary of the Tseung Kwan O OZP, and was exhibited for public inspection under section 5 or 7 of the Ordinance.

2.8 On 17 April 2012, the CE in C, under section 9(1)(a) of the Ordinance, approved the draft Tseung Kwan O OZP, which was subsequently renumbered as S/TKO/20. On 29 April 2014, the CE in C referred the approved Tseung Kwan O OZP No. S/TKO/20 to the Board for amendment under section 12(1)(b)(ii) of the Ordinance. On 16 May 2014, the reference was notified in the Gazette under section 12(2) of the Ordinance.

2.9 On 27 February 2015, the draft Tseung Kwan O OZP No. S/TKO/21 incorporating amendments mainly to rezone a site in Area 85 from "Other Specified Uses" annotated "Sewage Treatment Works" to "Government, Institution or Community (9)" to facilitate a proposed data centre development was exhibited for public inspection under section 5 of the Ordinance. In addition, the road schemes of the Tseung Kwan O – Lam Tin Tunnel and the Cross Bay Link, Tseung Kwan O authorized by the CE in C under the Roads (Works, Use and Compensation) Ordinance are shown on the Plan for information. During the exhibition period, a total of 385 representations were received. On 29 May 2015, the representations were published for three weeks for public comments and 9 comments were received. On 11 September 2015, the Board decided not to propose any amendment to the draft OZP to meet the representations under section 6(B)8 of the Ordinance.

2.10 On 1 December 2015, the CE in C, under section 9(1)(a) of the Ordinance, approved the draft Tseung Kwan O OZP, which was subsequently renumbered as S/TKO/22. On 11 December 2015, the approved Tseung Kwan O OZP No. S/TKO/22 was exhibited for public inspection under section 9(5) of the

Ordinance. On 5 April 2016, the CE in C referred the approved Tseung Kwan O OZP No. S/TKO/22 to the Board for amendment under section 12(1)(b)(ii) of the Ordinance. The reference was notified in the Gazette on 15 April 2016 under section 12(2) of the Ordinance.

2.11 On 24 June 2016, the draft Tseung Kwan O OZP No. S/TKO/23, incorporating an amendment to rezone a site in the south-eastern part of Tseung Kwan O Area 137 for desalination plant use, was exhibited for public inspection under section 5 of the Ordinance. In addition, the footbridge as described in the road scheme of the Tseung Kwan O further development infrastructure works for Tseung Kwan O Stage 1 Landfill Site as authorized by the CE in C under the Roads (Works, Use and Compensation) Ordinance is shown on the Plan for information. During the two-month exhibition period, one valid representation was received. On 9 September 2016, the representation was published for three weeks for public comments and one comment was received. After giving consideration to the representation and comment on 16 December 2016, the Board decided not to propose any amendment to the draft OZP to meet the representation under section 6B(8) of the Ordinance.

2.12 On 14 March 2017, the CE in C, under section 9(1)(a) of the Ordinance, approved the draft Tseung Kwan O OZP, which was subsequently renumbered as S/TKO/24. On 24 March 2017, the approved Tseung Kwan O OZP No. S/TKO/24 ~~*(the Plan)*~~ was exhibited for public inspection under section 9(5) of the Ordinance.

2.13 On 27 June 2017, the CE in C referred the approved Tseung Kwan O OZP No. S/TKO/24 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 7 July 2017 under section 12(2) of the Ordinance.

2.14 On _____ 2017, the draft Tseung Kwan O OZP No. S/TKO/25 (the Plan), incorporating amendments to rezone five sites to facilitate public housing development, including one in Area 114 to the north of Tseung Kwan O Village, one in Area 111 to the northwest of Ying Yip Road, one in Areas 35 and 108 to the south of Chiu Shun Road, one in Area 113 to the west of Yau Yue Wan Village and one in Area 106 to the east of Hong Kong Movie City, 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 transport networks for the Tseung Kwan O area so that development and redevelopment in the area can be subject to statutory planning control. Such control is necessary to develop Tseung Kwan O New Town into a balanced community.

3.2 The Plan is to illustrate the broad principles of development within the Planning Scheme Area. As it is a small-scale plan, the alignment of roads and the Mass Transit Railway (MTR) line as well as boundaries between the land use zones

may be subject to minor alterations as detailed planning and development proceed.

3.3 Since the Plan is to show broad land use zonings, there would be 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 zones. The general principle is that such areas should not be taken into account in plot ratio (PR) and site coverage (SC) calculation. Development within zones should be restricted to building lots carrying development right in order to maintain the character and amenity of the Tseung Kwan O area and not to overload the road network in this area.

4. NOTES OF THE PLAN

4.1 Attached to the Plan is a set of Notes which shows the types of uses or developments which are always permitted within the Planning Scheme Area 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), which covers an area of about 1,718 hectares (ha), is located at the southern part of Sai Kung District in the South East New Territories. It is bounded by Clear Water Bay Peninsula to the east, Junk Bay to the south, Lam Tin and Sau Mau Ping areas to the west, and Tseng Lan Shue and the Hong Kong University of Science and Technology to the north. The Area is surrounded by steep sloping hills in the north, east and west, and is physically segregated from East Kowloon and Clear Water Bay Peninsula.

5.2 The boundary of the Area is shown in a heavy broken line on the Plan. For planning and reference purposes, the Area has been divided into a number of smaller planning areas as shown on the Plan.

6. POPULATION

Based on the 2011 Population Census, the population of the Area was estimated by the Planning Department as about 371,000 persons. It is estimated that the planned population of the Area would be about ~~*451,000*~~ ***483,000*** persons.

7. URBAN DESIGN FRAMEWORK

7.1 Tseung Kwan O is a third generation new town. Capitalizing on the enhanced accessibility brought about by Tseung Kwan O MTR Line, high-density developments are located close to MTR stations at Po Lam, Hang Hau, Tseung Kwan O, Tiu Keng Leng and Tseung Kwan O South, each forming a district centre with its own retail and supporting facilities. The southeastern part of the New Town is reserved for specific uses to meet territorial needs, such as Tseung Kwan O Industrial Estate in Area 87, deep waterfront industries and a desalination plant in Area 137, landfills and proposed landfill extension in Areas 77, 101, 105 and 137.

7.2 As recommended under the Study completed in 2005, an urban design framework has been formulated mainly for the new development areas in Town Centre South, Tiu Keng Leng and Pak Shing Kok areas to direct the development of a coherent and legible structure of land uses, urban form and open spaces that is appropriate to the unique development context of a waterfront and valley setting of the New Town.

7.3 The framework seeks to optimize opportunities afforded by the new development areas in Town Centre South to create a new and distinctive waterfront district that capitalizes on the dramatic visual and physical relationship of the natural landscape of the surrounding country parks and Junk Bay, with the objective of fostering a unique district identity. It also seeks to maximize the development potential of the existing Eastern Channel and Junk Bay by promoting water sports and recreation. The primary objective is to provide a high quality vibrant leisure and recreational area for the enjoyment of the Tseung Kwan O residents and visitors. The new development areas in the Town Centre South, Tiu Keng Leng and Pak Shing Kok areas are intended to be highly integrated with the hinterland through the provision of a comprehensive pedestrian circulation and open space framework and to incorporate architectural designs and landscape treatments that promote a positive public image of the New Town.

7.4 The key features of the new development areas proposed under the urban design framework include the following:

(a) reduction in the population density within Town Centre South and Tiu Keng Leng from that formerly proposed for the area;

(b) diminution in building height towards the waterfront with modulation in building height at the waterfront to enhance variety in the height and massing of new development;

(c) elimination of waterfront roads to promote a more pedestrian friendly and attractive waterfront district;

(d) provision of a “Central Avenue” which is a landscaped pedestrian retail corridor in the form of open space that links the commercial and entertainment node adjacent to MTR Tseung Kwan O Station with the waterfront;

(e) provision of a high quality waterfront park and promenade with related leisure and commercial uses;

(f) provision of a new riverine park along a landscaped corridor adjacent to the Eastern Channel that provides connections to the waterfront and opportunities for active and passive recreation;

(g) provision for water sports activity and recreation in the Eastern Channel and Junk Bay;

(h) continual provision of a comprehensive breezeway system by suitably aligned open space, low-rise Government, institution or community (GIC) facilities and major road corridors to promote better ventilation within the New Town;

(i) provision of a signature Civic Node and GIC cluster at the western gateway to the New Town at the intersection of Po Yap Road and Road P2;

(j) provision of 'breathing spaces' for the more densely populated areas such as Tiu Keng Leng, by the introduction of district parks and local open spaces;

(k) provision of low-rise developments at Pak Shing Kok to maintain the existing ridgeline when viewed from Sai Kung;

(l) promotion of lively streetscapes and activities and avoidance of podium developments which may create 'dead' development edges; and

(m) development of Cross Bay Link in the form of a landmark feature bridge.

8. LAND USE ZONINGS

8.1 "Comprehensive Development Area" ("CDA") : Total Area 38.72 ha

8.1.1 This zone is intended for comprehensive development/redevelopment of the area for residential and/or commercial uses with the provision of open space and other supporting facilities. It is to facilitate appropriate planning control over the development mix, scale, design and layout of development, taking into account of various environmental, traffic, infrastructure and other constraints. It is also intended for developing or redeveloping relatively large sites in a comprehensive manner and maintaining planning control within the zone through the submission of a Master Layout Plan (MLP). Developments within this zone are subject to gross floor area (GFA) and/or building height restrictions. To provide flexibility for innovative design adapted to the characteristics of particular sites, minor relaxation of these restrictions may be considered by the Board through the planning permission system. Each proposal will be considered on its individual planning merits.

8.1.2 The "CDA" site in Area 86 is intended to facilitate comprehensive development including a MTR depot, a MTR station, associated property development and supporting community facilities. Development/redevelopment within this "CDA" site is restricted to a maximum domestic GFA of 1,612,800m^2 and a maximum non-domestic GFA of 40,000m^2 (mainly for retail purpose).

8.1.3 The existing film studio site in Area 92 is within this zoning and is intended for comprehensive redevelopment for low-density residential use. Development or redevelopment within this "CDA" site is restricted to a maximum GFA of 15,700m^2 and a maximum building height of 6 storeys over one level of carport.

8.1.4 Pursuant to section 4A(1) of the Ordinance, any development proposal under this zoning will require the approval of the Board by way of a planning application under section 16 of the Ordinance. Unless otherwise specified, a MLP should be submitted together with environmental, traffic and other relevant assessment reports as well as other materials as specified in the Notes of the Plan for the approval of the Board under section 4A(2) of the Ordinance. A copy of the approved MLP will be made available for public inspection pursuant to section 4A(3) of the Ordinance.

8.2 "Commercial/Residential" ("C/R") : Total Area 20.07 ha

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

8.2.2 The areas within this zoning are primarily planned and concentrated in the town centre and district centres where accessibility is enhanced by MTR Tseung Kwan O Extension.

8.3 "Residential (Group A)" ("R(A)") : Total Area ~~*144.97*~~ ***156.17*** ha

8.3.1 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.

8.3.2 This zoning constitutes the major type of residential land uses in the Area. It covers public rental housing estates (PRH), Home Ownership Schemes (HOS), Private Sector Participation Schemes (PSPS), Sandwich Class Housing (SCH) and Flat for Sale Schemes (FFSS) as well as private residential developments. Commercial uses such as eating places, offices, shops and services are permitted as of right on the lowest three floors of the buildings, including basement(s), and in the purpose-designed non-residential portion of the existing buildings.

8.3.3 Existing PRH estates include Tsui Lam Estate in Area 5, Po Lam Estate in Area 14, King Lam Estate in Area 23, Ming Tak Estate in Area 34, Hau Tak Estate in Areas 39 & 41, Sheung Tak Estate in Area 59, Yee Ming Estate in Area 65, Kin Ming Estate in Area 73 and part of Choi Ming Court in Area 74. In addition, thirteen HOS developments namely King Ming Court in Area 6, Ying Ming Court in Area 14, Yan Ming Court in Area 21, Ho Ming Court in Area 23, Hin Ming Court and Yuk Ming Court in Area 34, Yu Ming Court in Area 39, Chung Ming Court in Area 41, Wo Ming Court in Area 34/44, Tong Ming Court in Area 57, Kwong Ming Court and Po Ming Court in Area 59, and part of Choi Ming Court in Area 74, as well as four PSPS developments namely Fu Ning Garden in Area 30, On Ning Garden in Area 40, Beverly Garden in Area 55 and Bauhinia Garden in Area 65 have also been completed.

8.3.4 Existing SCH developments comprise Serenity Place in Area 13, Radiant Towers in Area 18 and The Pinnacle in Area 24. Verbena Heights in Area 19 is an existing mixed public rental and FFSS development developed by the Hong Kong Housing Society.

8.3.5 The ex-Tiu Keng Leng cottage area in Areas 73 and 74 has been cleared and planned primarily for the development of PRH estates and private residential developments. Most of the residential developments within the area have been completed.

8.3.6 There are ~~*six*~~ ***seven*** sub-areas within this zone, each with its own specific development restrictions:

(a) "Residential (Group A)1" ("R(A)1") : 1.49 ha

A site to the southwest of Kin Ming Estate in Area 73 is zoned "R(A)1". Development within this sub-area is restricted to maximum domestic and non-domestic PRs of 5.5 and 0.5 respectively and a maximum building height of 138m above Principal Datum (mPD). A stepped building height profile should be adopted for developments within the site thereby reducing its visual impact on the surrounding low-rise GIC developments.

(b) "Residential (Group A)2" ("R(A)2") : 6.60 ha

Two sites in Area 66 to the south of Po Yap Road are zoned "R(A)2". Development within this sub-area is subject to maximum domestic and non-domestic PRs of 5 and 0.5 respectively, a maximum SC of 50% and a maximum building height of 100mPD. Podium development within these sites should be avoided as far as possible, but may be used within these sites to act as noise mitigation measure against Po Yap Road. Besides, built form and heights should be articulated to create a varied and interesting built form and activity/development edge. Retail and commercial facilities should be promoted along the boundaries fronting directly onto

the pedestrianized Central Avenue. The Wings II, ***The Wings IIIA, the Wings IIIB,*** The Parkside and Twin Peaks fall within this sub-area.

(c) "Residential (Group A)3" ("R(A)3") : 3.04 ha

A site in Area 65 to the east of Bauhinia Garden is zoned "R(A)3". Development within this sub-area is restricted to maximum domestic and non-domestic PRs of 4 and 0.5 respectively, a maximum SC of 50% and a maximum building height of 100mPD. A public open space with a site area of 4,600m^2 at the southern portion of this sub-area has been provided at street level to serve as a transitional buffer with the adjacent non-residential developments as well as serving the needs of the surrounding neighbourhoods. To be compatible with the overall urban design concept of the Town Centre South area, the use of podium and wall-like development within this sub-area is avoided. Yee Ming Estate, a PRH estate, falls within this sub-area.

(d) "Residential (Group A)4" ("R(A)4") : 3.54 ha

A site in Area 65 to the west of the Eastern Channel is zoned "R(A)4". Development within this sub-area is restricted to maximum domestic and non-domestic PRs of 3 and 0.5 respectively, and a maximum SC of 50%. To achieve a gradation in height towards the waterfront, this sub-area has different building height restrictions, i.e. 65mPD for Area (a) and 35mPD for Area (b). To create a varied and interesting activity edge along the waterfront promenade, publicly accessible outdoor spaces in the form of 'urban courtyards' are encouraged to be provided adjoining the promenade within the site. It is proposed that recreational and entertainment uses such as alfresco dining, sitting out areas, gardens could be provided within these outdoor spaces. Apart from ***a*** private residential development~~s~~, ***The Savanah***, a subsidized sales flats ***project*** to be developed by Housing Authority is included.

(e) "Residential (Group A)5" ("R(A)5") : 3.67 ha

Two sites in Area 66 abutting the town plaza and the waterfront park along Tong Chun Street and along Tong Yin Street respectively are zoned "R(A)5". They are subject to maximum domestic and non-domestic PRs of 3 and 0.5 respectively, a maximum SC of 50% and a maximum building height of 65mPD. Retail and commercial activities should be developed along the edge that fronts onto the town plaza and the waterfront park. Corinthia By The Sea falls within this sub-area.

(f) "Residential (Group A)6" ("R(A)6") : 9.36 ha

Two sites in Area 68, one along Tong Chun Street to the west of the Eastern Channel and one along Tong Yin Street to the south of the Civic Node are zoned "R(A)6". They are subject to maximum domestic and non-domestic PRs of 2 and 0.5 respectively, and a maximum SC of 50%. To achieve a gradation in height towards the waterfront, this sub-area also has different building height restrictions, i.e. 50mPD for Area (a), 35mPD for Area (b) and 60mPD for Area (c). The building height restriction for Area (c) of both sites is intended to allow the development of a feature tower to provide height variation at the waterfront. Similar to the "R(A)4" site, 'urban courtyards' are encouraged to be provided along the promenade. ***The Capri falls within this sub-area.***

(g) "Residential (Group A)7" ("R(A)7"): 11.20 ha

Five Sites, including one in Area 114 to the north of Tseung Kwan O Village, one in Area 111 to the northwest of Ying Yip Road, one in Areas 35 and 108 to the south of Chiu Shun Road, one in Area 113 to the west of Yau Yue Wan Village and one in Area 106 to the east of Hong Kong Movie City, are zoned "R(A)7". Development within this sub-area is subject to a maximum PR of 6.5 and maximum building heights in metres above Principal Datum as stipulated on the Plan.

8.3.7 The five sites in the "R(A)4", "R(A)5" and "R(A)6" sub-areas are intended for the development of waterfront-related commercial and residential uses. These sites will provide a mix of high quality residential development with the provision of retail and other commercial, leisure and entertainment activities to enhance activity and to create a unique, interesting and vibrant waterfront for use by local residents and visitors. The different building height restrictions within these sub-areas are intended to introduce a height variation for each site.

8.3.8 Land has been reserved in the "R(A)5" site at Tong Yin Street and two "R(A)6" sites adjacent to the waterfront promenade for the provision of 24 hour-dedicated pedestrian passageways. These are generally non-building areas which will follow the major pedestrian desire lines and guide pedestrians to the waterfront. The passageways would be landscaped to high quality and are planned to be consistent with the waterfront landscape treatments.

8.3.9 The use of podium and wall-like development within the "R(A)2", "R(A)3", "R(A)4", "R(A)5" and "R(A)6" sub-areas should be avoided to ensure compatibility with the overall urban design concept of the Town Centre South area, particularly the promotion of lively

streetscapes and activities. This objective would be attained by ensuring the inclusion of car parking facilities, loading/unloading facilities, plant room, caretaker's office and quarters and recreational facilities in SC calculation, if provided above ground. Future developments are encouraged to adopt suitable design measures to minimize any possible adverse air ventilation impacts. These include lower podium height, greater permeability of podium, wider gap between buildings, non-building area to create air path for better ventilation and minimize the blocking of air flow through positioning of building towers and podiums to align with the prevailing wind directions, as appropriate.

8.3.10 To provide flexibility for innovative design adapted to the characteristics of particular sites, minor relaxation of PR/SC/building height restrictions of the sub-areas and/or minor adjustment to the boundaries of Areas (a)/(b) of "R(A)4" and/or Areas (a)/(b)/(c) of "R(A)6" may be considered by the Board through the planning permission system. Each proposal will be considered on its individual planning merits.

8.3.11 An Air Ventilation Assessment Expert Evaluation (AVA EE) (2017) has been carried out for the sites within "R(A)7" sub-area. For all the sites excluding the one in Areas 35 and 108 to the south of Chiu Shun Road, it is found that design measures including building separations and open space at designated areas would alleviate the potential air ventilation impacts on the surrounding wind environment. Quantitative AVAs should be carried out at the detailed design stage. Requirements of the design measures and quantitative AVAs will be incorporated in the planning brief for implementation.

8.4 "Residential (Group B)" ("R(B)") : Total Area 4.49 ha

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

8.4.2 Two sites are under this zoning, one is Hong Sing Garden in Area 4 and the other is Oscar by the Sea (the ex-Hong Kong Oxygen site) in Area 51.

8.5 "Residential (Group C)" ("R(C)") : Total Area 0.66 ha

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

8.5.2 Developments within this zone are subject to PR, SC and building height controls.

"Residential (Group C)1" ("R(C)1") : 0.66 ha

Development within this sub-area is restricted to a maximum PR of 0.6, a maximum SC of 30%, and a maximum building height of 2 storeys over one level of carport, or the PR, SC and height of the existing building(s), whichever is the greater. These restrictions are to ensure that any development or redevelopment of this sub-area will be in line with the general character of the adjoining environment. Two sites in Areas 36 and 92 fall within this sub-area.

8.5.3 Application for minor relaxation of the PR/SC/building height restrictions may be considered by the Board under section 16 of the Ordinance. The purpose of this provision is to allow the Board to consider building layout and design proposals which, whilst not strictly complying with the stated restrictions, will meet the planning objectives for the area and provide some additional benefits, such as the conservation of environmentally important natural features or mature vegetation. Each application will be considered on its own merits.

8.6 "Residential (Group E)" ("R(E)") : Total Area 4.00 ha

8.6.1 This zone is intended primarily for phasing out of existing industrial uses through redevelopment (or conversion) for residential use on application to the Board.

8.6.2 Two sites abutting Shek Kok Road in Area 85 are under this zoning. Development within the zone is subject to a maximum PR of 5 and a maximum building height of 130m. To provide flexibility for innovative design adapted to the characteristics of particular sites, minor relaxation of the building height restriction may be considered by the Board through the planning permission system. Each proposal will be considered on its individual planning merits. The Beaumount and The Beaumount II fall within this zone.

8.6.3 The developers will be required to submit adequate information to demonstrate that new residential developments will be environmentally acceptable, and suitable mitigation measures, if required, will be implemented to address the potential industrial/residential interface problems, the potential land contamination issue, and the noise impact of the MTR open track section nearby. One of the sites will also accommodate a public vehicle park comprising 21 private car and 26 lorry parking spaces for reprovisioning of a public vehicle park originally located at the northern end of Shek Kok Road. One footbridge across Wan Po Road and one across Shek Kok Road to link up the sites with the "CDA" in Area 86 are required in the new residential developments.

8.6.4 Under this zoning, existing industrial uses will be tolerated but new industrial development will not be permitted upon redevelopment in order to avoid the perpetuation or aggravation of the industrial/ residential interface problems with the new residential development

during the redevelopment process. In existing industrial buildings, new developments involving offensive trades will not be permitted. Any modification of use from non-industrial to industrial uses (other than non-polluting industrial uses) within existing industrial buildings will require the permission of the Board. In addition, commercial uses, other than those permitted in the purpose-designed non-industrial portion of the existing industrial buildings, would require the permission of the Board. Upon redevelopment of the industrial buildings to non-industrial buildings, commercial uses will be permitted as of right on the lowest three floors, including basement(s), and in the purpose-designed non-residential portion of the existing buildings.

8.7 "Village Type Development" ("V") : Total Area ~~*22.01*~~ ***22.03*** ha

8.7.1 The planning intention of this zone is to reflect existing recognized and other villages, and to provide land considered suitable for village expansion and reprovisioning of village houses affected by government projects. 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.

8.7.2 In order to retain the village character, any future development or redevelopment within this zone, except otherwise specified, is subject to a maximum building height of 3 storeys (8.23m) or the height of the existing building(s), whichever is the greater. To provide flexibility for innovative design adapted to the characteristics of particular sites, minor relaxation of the building height restriction may be considered by the Board through the planning permission system. Each proposal will be considered on its individual planning merits.

8.7.3 This zoning covers the existing villages including Tseung Kwan O Village in Area 7, Mau Wu Tsai Village in Area 123 and Boon Kin Village in Area 109. It also includes the Yau Yue Wan Village resite area in Area 22, the Hang Hau Village resite area in Area 31, the Fat Tau Chau and Tin Ha Wan Village resite areas in Area 35. Besides, a site in Area 8 is reserved for the future expansion of Tseung Kwan O Village.

8.8 "Government, Institution or Community" ("G/IC") : Total Area ~~*142.77*~~ ***142.56*** ha

8.8.1 This zone is intended primarily for the provision of GIC facilities serving the needs of the local residents and/or a wider district, region or the territory. It is also intended to provide land for uses directly related to or in support of the work of the Government, organizations

providing social services to meet community needs, and other institutional establishments.

8.8.2 There are a number of sub-areas under this zone, each with its own specific building height restriction to ensure that developments within these sub-areas are in line with the overall urban design concept of the New Town:

(a) "Government, Institution or Community (1)" ("G/IC(1)") : 5.16 ha

Development within this sub-area is restricted to a maximum building height of 75m. A piece of land in Area 67 which is reserved for the development of a Civic Node falls within this sub-area. The Civic Node will comprise a cultural complex/town hall, government offices, lorry park and public car parking facilities. Landmark buildings should be developed within this site to create a symbolic 'gateway' at this prominent location. This site, together with the proposed GIC cluster to the west of Road P2 in Area 72, will form the western gateway of the New Town.

(b) "Government, Institution or Community (2)" ("G/IC(2)") : 2.42 ha

Development within this sub-area is restricted to a maximum building height of 55m. The campus of Hong Kong Design Institute and Hong Kong Institute of Vocational Education (Lee Wai Lee) of the Vocational Training Council to the south of Choi Ming Court in Area 74 fall within this sub-area.

(c) "Government, Institution or Community (3)" ("G/IC(3)") : 2.50 ha

Development within this sub-area is restricted to a maximum building height of 45m. Two sites are within this sub-area. A site located immediately to the northwest of MTR Tiu Keng Leng Station in Area 73 consists of two post-secondary colleges operated by Caritas Bianchi College of Careers and Caritas Institute of Higher Education. Another site in Area 65 is reserved for the development of a government complex, possibly for recreational and other uses.

(d) "Government, Institution or Community (4)" ("G/IC(4)") : 8.08 ha

Development within this sub-area is restricted to a maximum building height of 40m. There are four sites within this sub-area. One of them is located to the west of Road P2 in Area 72, which is reserved for the development of a GIC cluster comprising a social welfare complex, a police station, a fire station cum ambulance depot and a refuse collection point. The architecture of buildings within this GIC cluster should be distinctive and compatible with the Civic Node in Area 67 to create a landmark gateway at this location. Another site, which

is located in Area 106 and to the east of "G/IC(8)" sub-area in Area 78, is for the development of departmental quarters for Fire Services Department. The remaining two sites are located at Town Centre South comprising an existing primary school and a through-train primary cum secondary school in Area 65; a planned international school and a planned secondary school in Area 67.

(e) "Government, Institution or Community (5)" ("G/IC(5)") : 0.33 ha

Development within this sub-area is restricted to a maximum building height of 10m. A piece of land in Area 68, which is reserved for the development of a telephone exchange, is within this sub-area. Another site at the south-eastern portion of Area 77 is within this sub-area. It accommodates an existing gas and leachate management compound which serves to extract the gas and leachate in the Tseung Kwan O Stage I Landfill thereby keeping these substances down to acceptable levels.

(f) "Government, Institution or Community (6)" ("G/IC(6)") : 0.05 ha

Development within this sub-area is restricted to a maximum building height of 5m. A site in Area 77, which is reserved for the development of a sewage pumping station, is within this sub-area. This pumping station serves to convey the collected sewage from the Tseung Kwan O Stage I Landfill to the existing trunk sewer under Wan Po Road.

(g) "Government, Institution or Community (7)" ("G/IC(7)") : 16.11 ha

A site in Pak Shing Kok (Area 78) occupied by the Fire and Ambulance Services Academy is within this sub-area. Development in Area (a) of this sub-area is restricted to a maximum building height of 100mPD, except a fire services rescue training tower up to 114mPD. Development in Area (b) of this sub-area is restricted to a maximum building height of 120mPD.

(h) "Government, Institution or Community (8)" ("G/IC(8)") : 6.05 ha

Development within this sub-area is restricted to a maximum building height of 106mPD. A site in Pak Shing Kok (Area 78) reserved for a Chinese Medicine Hospital and future GIC uses is within this sub-area.

(i) "Government, Institution or Community (9)" ("G/IC(9)") : 6.87 ha

Development within this sub-area is restricted to a maximum building height of 60mPD, except a communications tower up to 76mPD. A site in Area 85 reserved for a new Radio Television

Hong Kong broadcasting house and future GIC uses is within this sub-area. To create a clustering effect of this sub-area with areas for broadcasting, innovation and technology industries in Tseung Kwan O, information technology and telecommunications related uses are permitted in this sub-area.

8.8.3 Specific building height restrictions for the "G/IC" sub-areas in terms of m or mPD, which mainly reflect the planned building heights of developments, have been incorporated into the Plan to provide visual and spatial relief to the Area.

8.8.4 To provide flexibility for innovative design adapted to the characteristics of particular sites, minor relaxation of the building height restriction of the sub-areas may be considered by the Board through the planning permission system. Each proposal will be considered on its individual planning merits.

8.8.5 Apart from the above, other major GIC facilities provided or planned in the Area include:

(a) existing and proposed primary and secondary schools distributed in various areas;

(b) a wide range of community facilities such as town hall, libraries, indoor recreation centres, community centres, care and attention homes and religious institutions in various areas;

(c) hospitals in Areas 27 and 32;

(d) clinics in Areas 22, 44***, ~~and~~*** 56 ***and 67***;

(e) police stations in Areas 21 and 72;

(f) fire stations and/or ambulance depots in Areas 10, 72 and 87;

(g) government staff quarters in Areas 22 and 106;

(h) YMCA Youth Camp in Area 122;

(i) electricity substations in Areas 11, 24, 39, 56 and 115;

(j) telephone exchanges in Areas 26 and 68;

(k) water pumping stations in Areas 5 and 120;

(l) service reservoirs in various areas; and

(m) film studio for pre-production and post-production of films in Area 106.

8.9 "Open Space" ("O") : Total Area 190.80 ha

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

8.9.2 Two sites in Areas 72 along Road P2 are proposed for the development of Tiu Keng Leng Park which includes landscaped pedestrian decks spanning across the depressed Road P2. This open space will provide some visual relief to the adjacent high density developments and will link up with the waterfront park in Area 68 via a waterfront promenade.

8.9.3 The central part of Area 68 fronting Junk Bay is proposed for a waterfront park which will link up with a town plaza proposed to its north in Area 66. The proposed waterfront park is intended predominantly for passive recreation with a high quality landscaping design to promote a unique identity for the New Town. The proposed town plaza is to serve primarily as an urban civic space with provision for public gatherings and other activities.

8.9.4 A semi-circular area in Area 66 south of Po Yap Road and MTR Tseung Kwan O Station is proposed to be developed as an open/green plaza serving as a recreational space for nearby residents and visitors and a buffer between MTR Tseung Kwan O Station and the future residential developments in Area 66.

8.9.5 A Central Avenue at Area 66 is proposed between the open/green plaza south of Po Yap Road and the town plaza which will form a major linkage between Town Centre North and the waterfront area. The proposed Central Avenue is intended primarily for the provision of a landscaped corridor in the form of open space, which would be flanked by retail development edges on both sides of the adjacent R(A) zones and landscaped to a high quality. Shops and services, and eating places including alfresco dining may be considered by the Board through the planning permission system.

8.9.6 A riverine park is proposed along the Eastern Channel in Area 65 and a waterfront promenade is proposed along Junk Bay in Area 68. The sites will provide a range of passive recreational facilities and opportunities. Alfresco dining may be considered by the Board through the planning permission system.

8.9.7 The landfill site in Area 105 has been decommissioned and restored. The landfill sites in Areas 101 and 137 will be developed into major open spaces upon completion of the landfill. However, any development proposals within the 250m Consultation Zone of these landfills will need to include a Landfill Gas Hazard Assessment to the satisfaction of the Environmental Protection Department (EPD).

8.9.8 Other open spaces are also provided in Areas 12, 24, 25, 37, 40, 73 and 74 and another site in Area 51 is reserved to provide recreational outlets for the nearby residential neighbourhood.

"Open Space (1)" ("O(1)") : 16.79 ha

8.9.9 In "O(1)", 'Place of Recreation, Sports or Culture' and 'Library' uses are always permitted. A town park in Area 45 provides a variety of active and passive recreational facilities, a sports ground and an indoor velodrome cum sports centre (IVSC). A sports centre together with a library (SCL) is provided in the open space in Area 74. The zoning of this sub-area allows locational and design flexibility for the provision of IVSC in Area 45 and SCL in Area 74. The building height of IVSC in Area 45 and SCL in Area 74 have not exceeded 30m above ground.

"Open Space (2)" ("O(2)") : 100.54 ha

8.9.10 The landfill sites in Areas 101 and 137 fall within the "O(2)" sub-area. The "O(2)" zoning is to reflect the long-term planning intention of open space use of the landfill sites after the decommissioning and restoration of the landfill, while permitting landfill use in the interim.

8.9.11 Upon detailed planning, additional local open spaces will be provided in the residential zones. These open spaces are however not shown on this Plan.

8.10 "Recreation" ("REC") : Total Area 65.85 ha

8.10.1 The planning intention of this zone is primarily for recreational developments for the use of the general public. It encourages the development of active and/or passive recreation and tourism/ eco-tourism. Uses in support of the recreational developments may be permitted subject to planning permission. The Tseung Kwan O Stage I Landfill in Area 77 is within this zone.

8.10.2 Given the development constraints associated with landfill sites, development within this zone is restricted to a maximum PR of 0.1 and a maximum building height of 1 storey. To provide design flexibility, minor relaxation of the PR/building height restrictions may be considered by the Board through the planning permission system. Each proposal will be considered on its individual planning merits. Moreover, similar to other landfill sites, any development proposals within the 250m Consultation Zone of the landfill will need to include a Landfill Gas Hazard Assessment to the satisfaction of EPD.

8.11 "Other Specified Uses" ("OU") : Total Area 225.69 ha

This zone denotes land allocated or reserved for specific uses, including the following:

(a) a waterfront site at the toe of the Tseung Kwan O Stage I Landfill in Area 77 is reserved for water sports and recreational facilities. Given the prominent location of this site and the constraints associated with landfill sites, development within this zone is restricted to a maximum PR of 0.5, a maximum SC of 50% and a maximum building height of 1 storey. To provide design flexibility, minor relaxation of the PR/SC/building height restrictions may be considered by the Board through the planning permission system;

(b) a pair of finger piers at the waterfront of Area 68 is proposed to cater for the berthing of recreational/pleasure vessels and kaidos thereby serving the needs of the community and to enhance the water-borne recreation and tourism potential of Junk Bay as well as the New Town. Structures to be accommodated are intended for low-intensity low-rise developments generally of one storey high, depending on the design. Dining, including alfresco dining, and recreation and tourism related commercial facilities may be considered by the Board through the planning permission system. Each proposal will be considered on its individual planning merits. In addition, special and/or atypical design of these piers is encouraged to allow the creation of a place of attraction, resting and recreation and/or focal and vantage point for visitors;

(c) a commercial development with public transport interchange in Area 56. This site is intended for an entertainment node within the New Town and comprises a range of entertainment, leisure and commercial uses. Some residential elements within the site has been allowed through planning permission from the Board and the development is known as The Wings;

(d) commercial/residential developments with public transport interchange on sites in Areas 17, 38 and 73;

(e) Tseung Kwan O Industrial Estate in Area 87, which enjoys the advantage of marine frontage as well as proximity to the Hong Kong University of Science and Technology;

(f) the deep-waterfront industry in Area 137 for industries which require marine access;

(g) the proposed desalination plant in the southeastern part of Area 137 which is intended to provide fresh water serving the needs of the community;

(h) a bus depot in Area 26;

(i) an explosive store in Area 124;

(j) petrol filling stations in Areas 10 and 16 which may include vehicle repair workshops subject to planning permission from the Board;

(k) the landing steps in Area 68;

(l) the sewage treatment works in Area 85;

(m) a cemetery in Area 130 with access from Ko Chiu Road in East Kowloon;

(n) an underground desilting compound in Area 68; and

(o) the proposed ventilation building for Tseung Kwan O – Lam Tin Tunnel in Area 128.

8.12 "Green Belt" ("GB") : Total Area ~~*760.13*~~ ***749.12*** ha

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. Development within this zone will be strictly controlled and development proposals will be considered on individual merits taking into account the relevant Town Planning Board Guidelines.

9. COMMUNICATIONS

9.1 Roads

9.1.1 Only major road networks, which comprise trunk roads, primary and district distributors, are 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.

9.1.2 The road schemes of Tseung Kwan O – Lam Tin Tunnel and Cross Bay Link, Tseung Kwan O were authorized by the CE in C on 29 April 2014 and 2 September 2014 respectively. The footbridge as described in the road scheme of the Tseung Kwan O further development infrastructure works for Tseung Kwan O Stage 1 Landfill Site was authorized by the CE in C on 21 July 2015. Pursuant to section 13A of the Ordinance, the road schemes authorized by the CE in C under the Roads (Works, Use and Compensation) Ordinance (Cap. 370) shall deem to be approved under the Ordinance and the road schemes are shown on the Plan for information only.

9.1.3 External access to and from the Area will be mainly via Tseung Kwan O Tunnel and Tseung Kwan O – Lam Tin Tunnel, supplemented by Po Lam Road as well as Ying Yip Road and Hang Hau Road connecting to Clear Water Bay Road.

9.1.4 Within the Area, a number of primary and district distributors and local roads have been planned to provide access between the various planning areas as well as access to each locality. In particular, two new major distributor roads, namely Cross Bay Link and Road P2 are proposed.

Cross Bay Link will be designed as a feature bridge and will provide direct access from Tseung Kwan O – Lam Tin Tunnel to Area 86, Tseung Kwan O Industrial Estate in Area 87 and the special industrial area in Area 137. Road P2 will provide a link from Tseung Kwan O – Lam Tin Tunnel directly into the town centre. A section of Road P2 will be depressed to reduce its environmental impact as well as to allow the provision of an at-grade pedestrian crossing in the form of landscaped decks above the depressed Road P2, which facilitates pedestrian movement from the waterfront park to the proposed Tiu Keng Leng Park.

9.2 Mass Transit Railway

Apart from Tseung Kwan O Tunnel and Tseung Kwan O – Lam Tin Tunnel, external access is supported by an extension of the MTR line from Lam Tin to Tseung Kwan O. Phase I of MTR Tseung Kwan O Extension project comprising four stations in Tseung Kwan O, namely Tiu Keng Leng, Tseung Kwan O, Hang Hau and Po Lam, commenced operation in August 2002. The MTR tracks are primarily underground, except for the section between Ho Ming Court and Po Shun Road, which are at grade and enclosed by structures with a landscaped bund on top to eliminate any noise impact caused by the MTR operation on the adjacent residential areas. Phase II of the project includes a spur line to Tseung Kwan O South with a depot and LOHAS Park Station in Area 86. The depot has been completed and the station commenced operation in July 2009. The railway scheme and its amendments have been authorized by the CE in C on 20 October 1998 and 14 September 1999 respectively and amended on 9 May 2005 by the then Secretary for Environment, Transport and Works.

9.3 Public Transport

Franchised buses, taxis, green mini-buses and ferries will be the main modes of public transport in addition to MTR. Public transport interchange facilities are/will be provided at strategic locations.

9.4 Pedestrian and Cycle Networks

The cycle track and pedestrian walkway networks will be designed to facilitate convenient cycle and pedestrian movements within the Area. Grade-separated pedestrian and cycle crossings will be provided at major pedestrian and cycle crossing points. A cycle track with associated facilities along the waterfront at Town Centre South has been completed.

10. UTILITY SERVICES

10.1 Water Supply

10.1.1 A water supply and distribution system has been implemented to meet the demand arising from the development in Tseung Kwan O.

10.1.2 Apart from the existing fresh water service reservoirs in Areas 1, 2, 3, 106, 113 and 125, an extension of fresh water service reservoir is proposed in Area 113 to cater for further development of the Area. Moreover, there is an existing fresh water pumping station in Area 120.

10.1.3 Apart from the existing salt water service reservoirs in Areas 1 and 5 and the existing salt water pumping stations in Areas 5 and 86, additional salt water service reservoir and pumping station will be reserved to cater for supply of flushing water.

10.2 Drainage and Sewage Collection

Surface water will be channeled into two main culverts for discharge into the sea. An overland drainage and flood path system will cater for very heavy rain and possible blockage of culverts. Sewage will be conveyed via a network of sewers and a sewer tunnel through Areas 108 and 78 to the sewage treatment works in Area 85 for treatment before being discharged into the Harbour Area Treatment Scheme Stage I deep tunnel conveyance system. There will be sufficient capacity to serve the currently planned developments.

10.3 Electricity

10.3.1 Electricity will be supplied to the Area through a new distribution network. Sites in Areas 11, 24, 39, 56, 86, 87 and 115 have been developed into electricity substations. Adequate sites have been reserved in Areas 72 and 137 for future electricity substations to meet the demand in short and long terms.

10.3.2 The facility at the site in Area 115 is a 400kV electricity substation. Stringent pollution control measures have been imposed in order to ensure that the adjacent residential neighbourhood will not be adversely affected.

10.4 Town Gas

The network for supplying town gas to the developments in the Area has been extended from Kowloon via Po Lam Road North, Tseung Kwan O Tunnel and Clear Water Bay Road.

10.5 Telephone

Telephone service is available through the telephone exchanges in Areas 26 and 87. An additional telephone exchange is reserved in Area 68 to cater for future demand.

11. CULTURAL HERITAGE

11.1 Several buildings/structures which are of historical significance and archaeological interest are located within the Area. They include Site of the Chinese Customs Station on Fat Tau Chau (Junk Island) (Fat Tau Chau is now

known as Fat Tong Chau) in Area 135, which is a Declared Monument under the Antiquities and Monuments Ordinance, Fat Tau Chau Site of Archaeological Interest, Fat Tau Chau Qing Dynasty Grave Stone and Fat Tau Chau House Ruin also in Area 135, Yau Yue Wan Kiln in Area 22, Tin Hau Temple at Hang Hau in Area 35 which is a Grade 3 historic building, Observation Post at Mau Wu Shan in Area 125 which is a Grade 1 historic structure as well as Fortifications at Devil's Peak in Area 132 which is a Grade 2 historic structure.

11.2 On 19 March 2009, the Antiquities Advisory Board (AAB) released the list of 1,444 historic buildings, in which some buildings/structures within the Area have been accorded gradings. 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 AAB. Details of the list of 1,444 historic buildings and its new items have been uploaded onto the official website of AAB at http://www.aab.gov.hk.

11.3 Prior consultation with the Antiquities and Monuments Office (AMO) of the Leisure and Cultural Services Department should be made if any development, redevelopment or rezoning proposals that might affect the above sites of archaeological interest, graded/proposed graded historic buildings/structures, declared monuments, new items pending grading assessment and their immediate environs. If disturbance of the site of archaeological interest or other areas of archaeological potential is unavoidable, a detailed Archaeological Impact Assessment (AIA) conducted by a qualified archaeologist is required. The archaeologist shall apply for a licence to conduct AIA under the Antiquities and Monuments Ordinance (Cap. 53). A proposal for AIA shall be submitted to AMO for agreement prior to applying for a licence.

12. IMPLEMENTATION

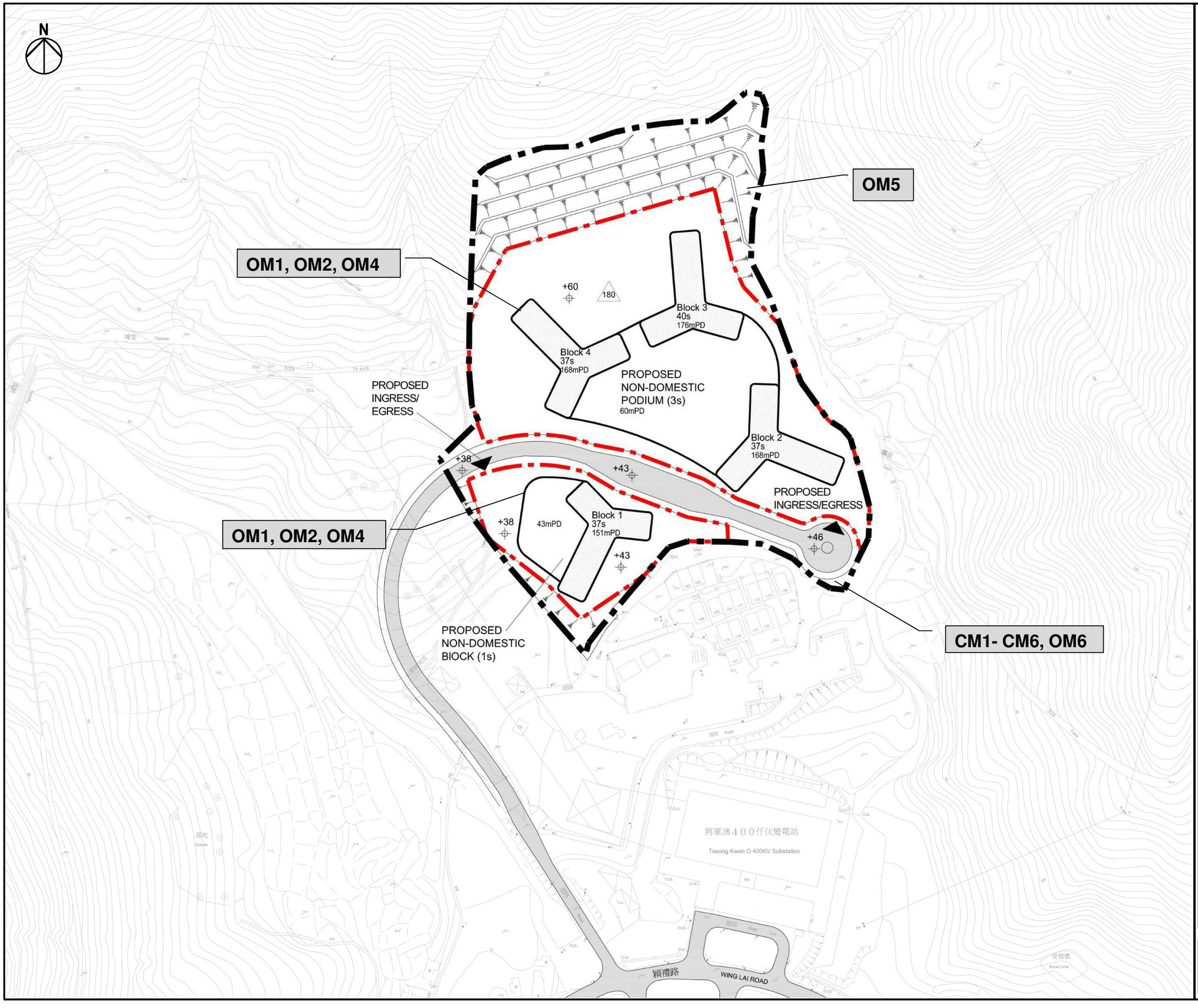
12.1 Although existing uses non-conforming to the statutory zonings are tolerated, any material change of use and any other development/redevelopment must be always permitted in terms of the Plan or, if permission is required, in accordance with the permission granted by the Board. The Board has published 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.

12.2 The Plan provides a broad land use framework within which more detailed non-statutory plans for the Area are prepared by the Planning Department. These detailed plans are used as the basis for public works planning and site reservation within the Government. Disposal of sites is undertaken by the Lands Department. Public works projects are co-ordinated by the Civil Engineering and Development Department in conjunction with the client departments and the works departments, such as the Highways Department

and the Architectural Services Department. Implementation of these public works projects will be subject to the availability of resources. In the course of implementation of the Plan, the Sai Kung District Council will also be consulted as appropriate.

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

TOWN PLANNING BOARD
***~~MARCH~~ JULY* 2017**



Study Area

Proposed Public Housing Site Area (Subject to detail design)

NOTE: Proposed Mitigation Measures is listed on **Figure 4.0**. The layout plan and slope profile will be subjected to detailed design stage. Greening measures of visual illustration also provided in Appendix A.

Rev	Description	By	Date

Consultant

ARUP

Contract No. and Title

Agreement No. NTE/03/2015
air ventilation and visual impact assessments for potential Housing sites in the vicinity of
Tseung Kwan O – FS

Drawing title

SKI-1 – north of Tseung Kwan O Village conceptual layout plan (subject to detail design)

Drawing no.	Rev.
	A

Drawn	Date	Checked	Approved
SYU	10/15	KC	SYC

Scale	Status
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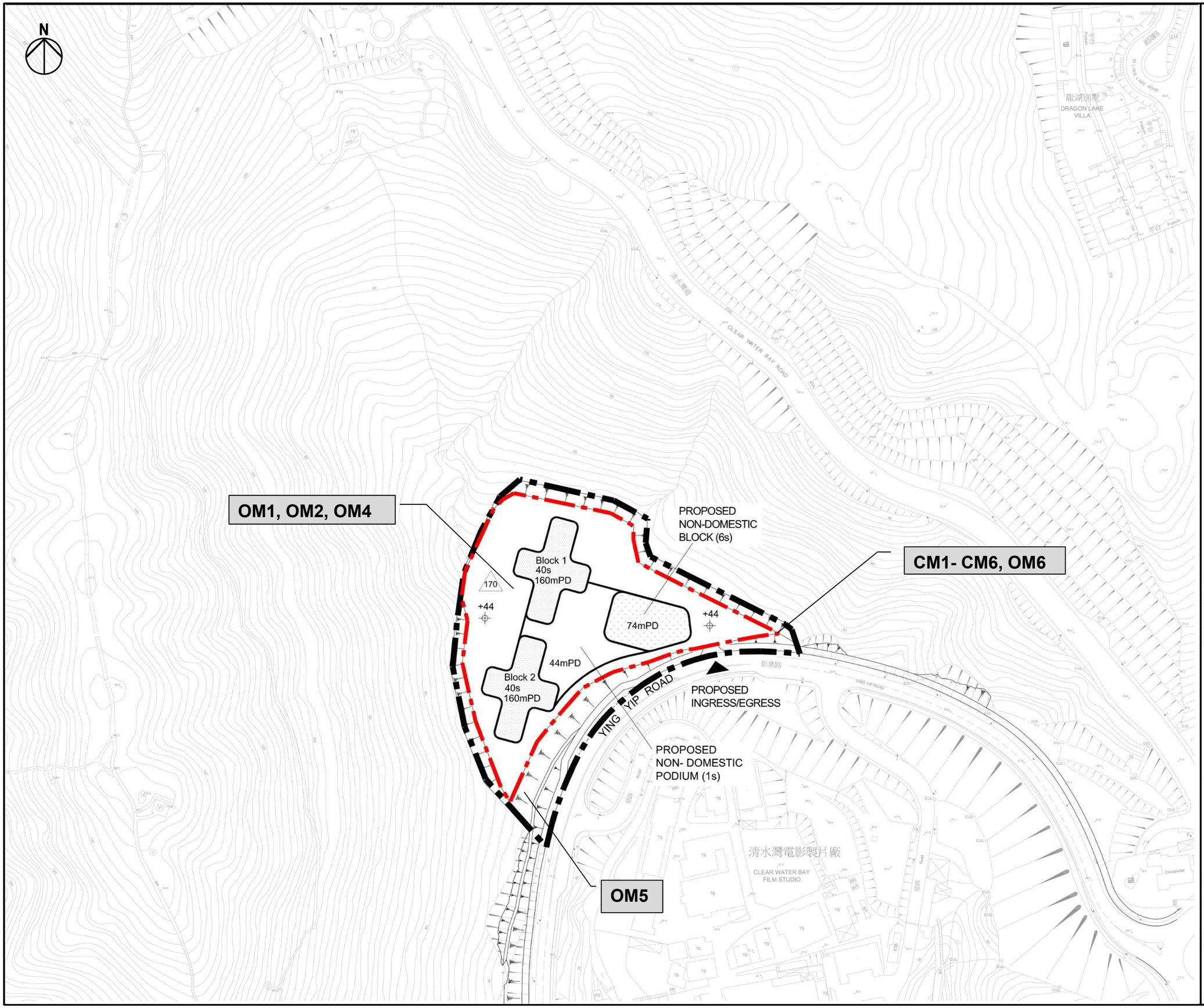

Study Area

Proposed Public Housing Site Area (Subject to detail design)

NOTE: Proposed Mitigation Measures is listed on **Figure 4.0**. The layout plan and slope profile will be subjected to detailed design stage. Greening measures of visual illustration also provided in Appendix A.

Rev	Description	By	Date

Consultant

ARUP

Contract No. and Title

Agreement No. NTE/03/2015
air ventilation and visual impact assessments for potential Housing sites in the vicinity of Tseung Kwan O – FS

Drawing title

SKI-2 – northwest of Ying Yip Road conceptual layout plan
(subject to detail design)

Drawing no.			Rev.
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Drawn: SYU	Date: 10/15	Checked: KC	Approved: SYC
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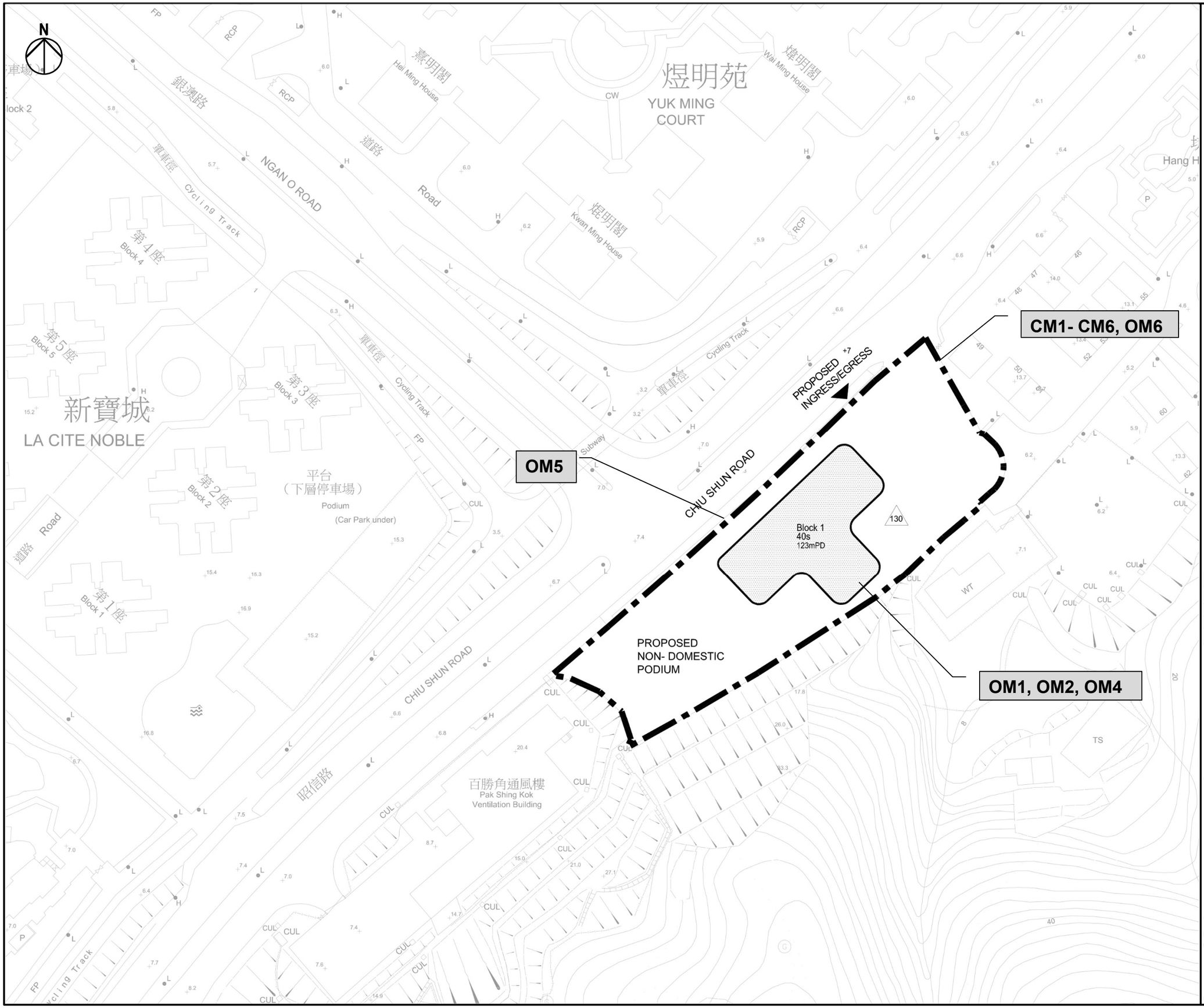

NOTE: Proposed Mitigation Measures is listed on **Figure 4.0**. The layout plan and slope profile will be subjected to detailed design stage. Greening measures of visual illustration also provided in Appendix A.

Rev	Description	By	Date

Consultant

ARUP

Contract No. and Title

Agreement No. NTE/03/2015
air ventilation and visual impact assessments for potential Housing sites in the vicinity of Tseung Kwan O – FS

Drawing title

SKI-6 – south of Chiu Shun Road conceptual layout plan
(subject to detail design)

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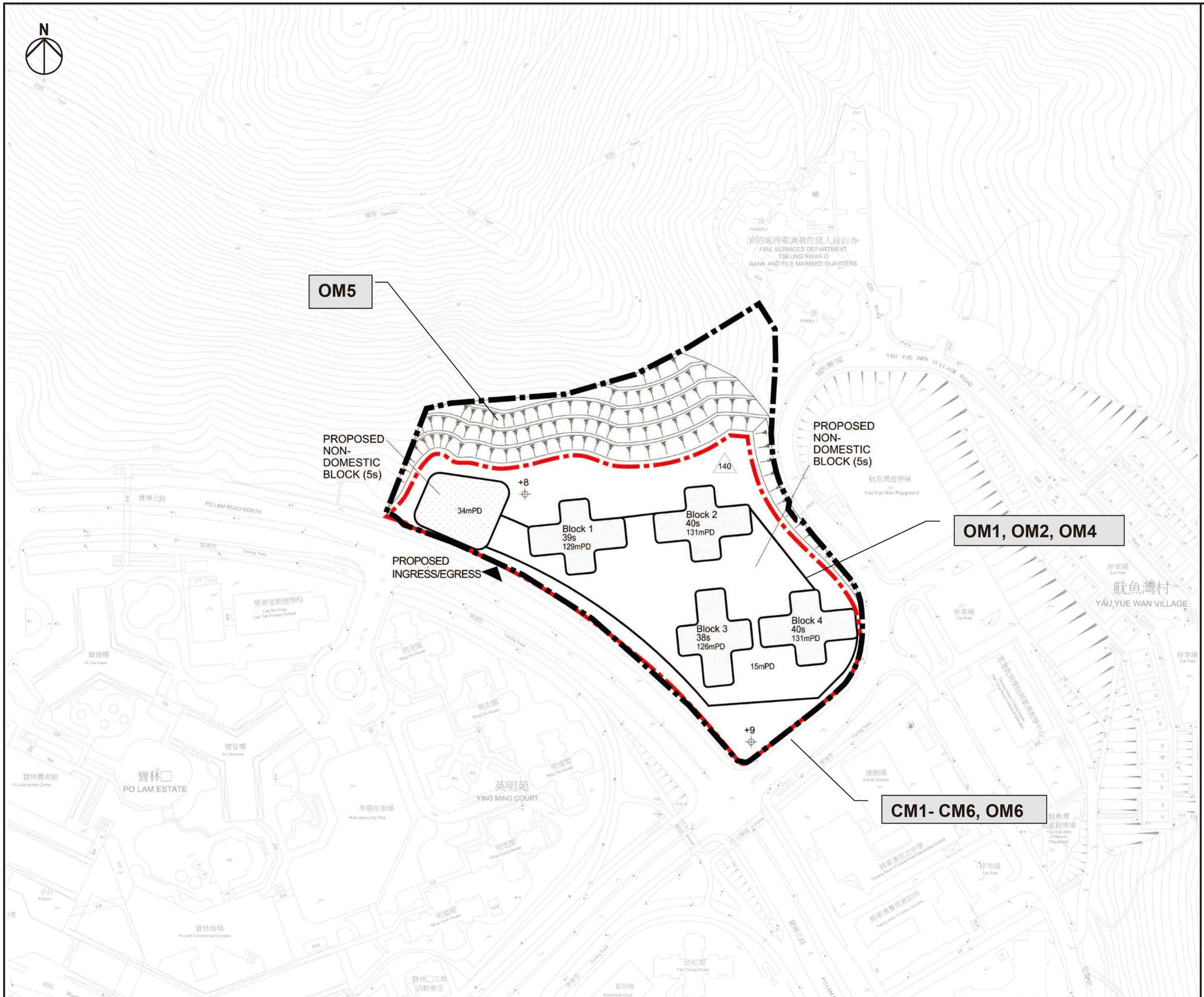

Study Area

Proposed Public Housing Site Area (Subject to detail design)

NOTE: Proposed Mitigation Measures is listed on **Figure 4.0**. The layout plan and slope profile will be subjected to detailed design stage. Greening measures of visual illustration also provided in Appendix A.

Rev	Description	By	Date

Consultant

ARUP

Contract No. and Title

Agreement No. NTE/03/2015
air ventilation and visual impact assessments for potential Housing sites in the vicinity of Tseung Kwan O – FS

Drawing title

SKI-11 - west of Yau Yue Wan Village
conceptual layout plan
(subject to detail design)

Drawing no.			Rev.
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Drawn: SYU	Date: 10/15	Checked: KC	Approved: SYC
Scale: -		Status	

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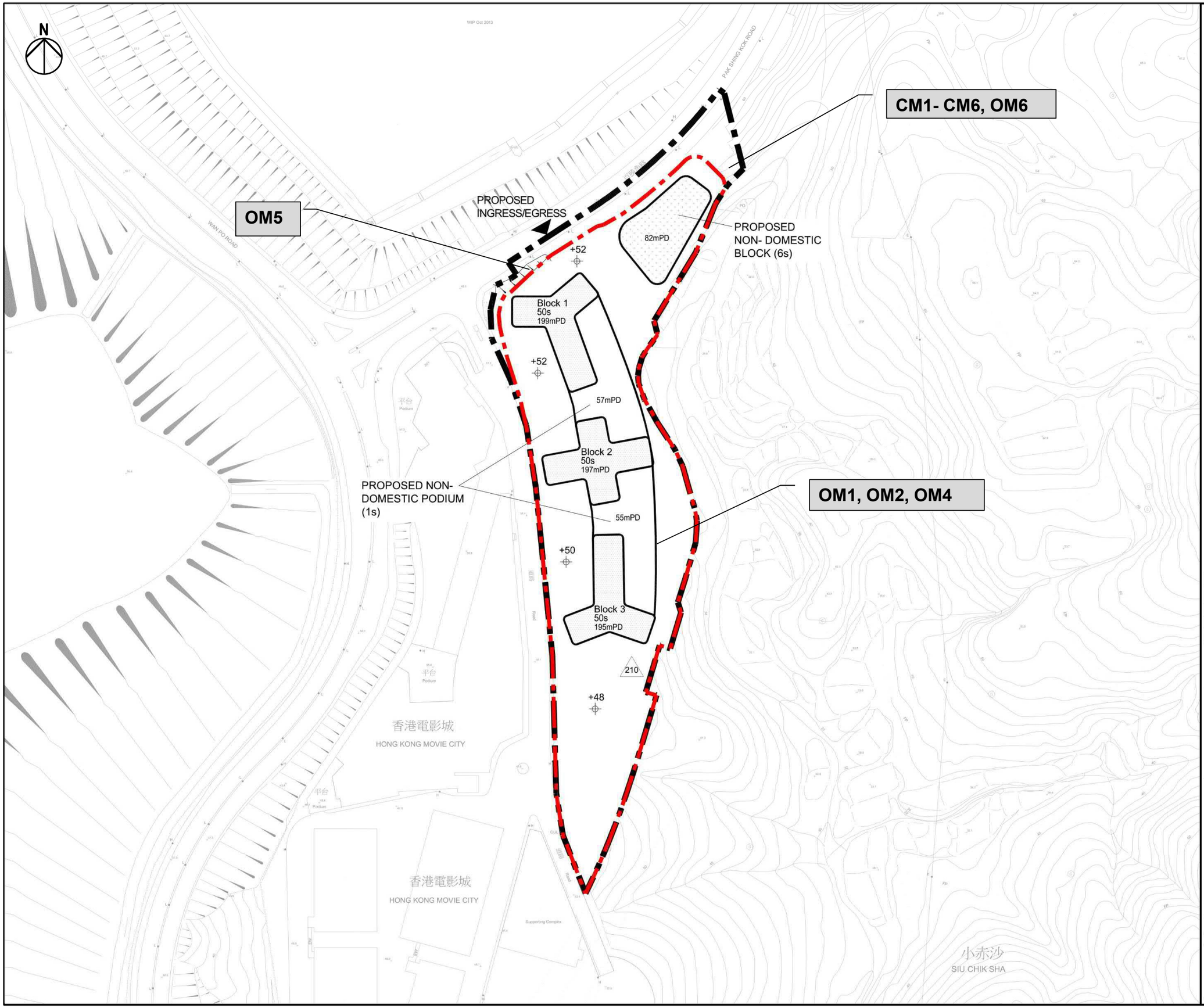

Study Area

Proposed Public Housing Site Area (Subject to detail design)

NOTE: Proposed Mitigation Measures is listed on **Figure 4.0**. The layout plan and slope profile will be subjected to detailed design stage. Greening measures of visual illustration also provided in Appendix A.

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Agreement No. NTE/03/2015
air ventilation and visual impact assessments for potential Housing sites in the vicinity of
Tseung Kwan O – FS

Drawing title

SKI-12 - east of Movie City conceptual layout plan
(subject to detail design)

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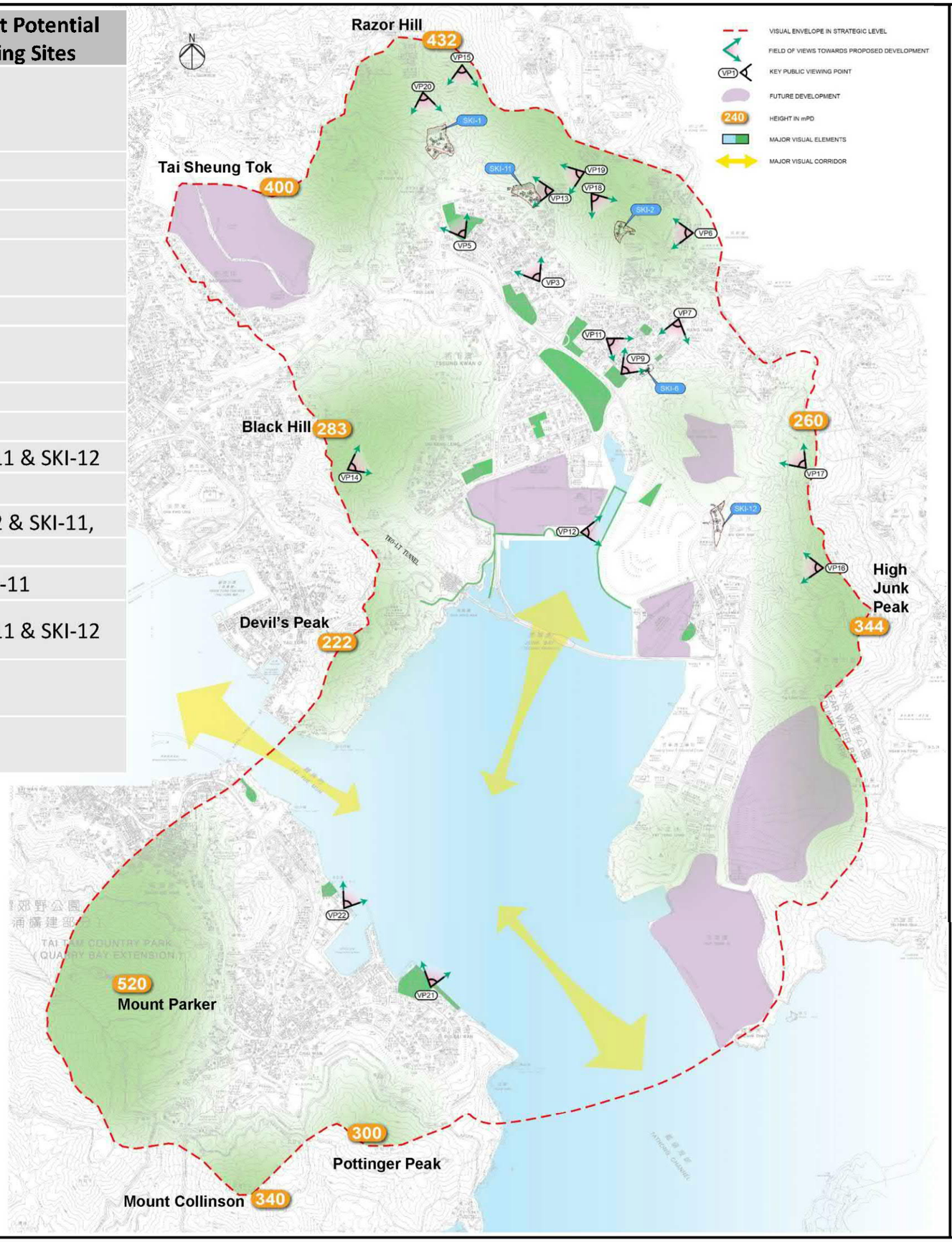
Key Public View Points		Relevant Potential Housing Sites
VP3	Decked Footpath connecting Po Lam MTR station to Tseung Kwan O Swimming Pool	SKI-1
VP5	Pavilion inside Po Tsui Park	SKI-1
VP6	Silverstrand Beach Public Car Park	SKI-2
VP7	Tseung Kwan O Hospital	SKI-6
VP9	Hang Hau Man Kuk Lane Park (facing northeast)	SKI-6
VP11	Hau Tak Shopping Centre	SKI-6
VP12	Tseung Kwan O Waterfront Promenade	SKI-12
VP13	Yau Yue Wan Village Playground	SKI-11
VP14	Wilson Trail Stage 3 (Black Hill)	SKI-12
VP15	Razor Hill	SKI-6, SKI-11 & SKI-12
VP16	High Junk Peak	SKI-12
VP17	Clear Water Bay Country Park Trail	SKI-1, SKI-2 & SKI-11,
VP18	Ap Tsai Shan (facing south)	SKI-2
VP19	Ap Tsai Shan (facing northwest)	SKI-1 & SKI-11
VP20	Wilson Trail Stage 3 (near Rise Park Villas)	SKI-1, SKI-11 & SKI-12
VP21	Siu Sai Wan Promenade and Sport Ground	SKI-12
VP22	Heng Fa Chuen Playground and Promenade	SKI-12



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Baseline of key visual elements for VIA
(overall plan)

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Existing View from VP3 - Decked Footpath connecting Po Lam MTR station to Tseung Kwan O Swimming Pool



Existing View from VP5 - Pavilion inside Po Tsui Park



Photomontage from VP3 - Decked Footpath connecting Po Lam MTR station to Tseung Kwan O Swimming Pool (with Housing Site)



Photomontage from VP5 - Pavilion inside Po Tsui Park (with Housing Site)

Note: The building height indicated at potential housing sites are the maximum building height (+mPD)

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Photomontage from VP3 & VP5

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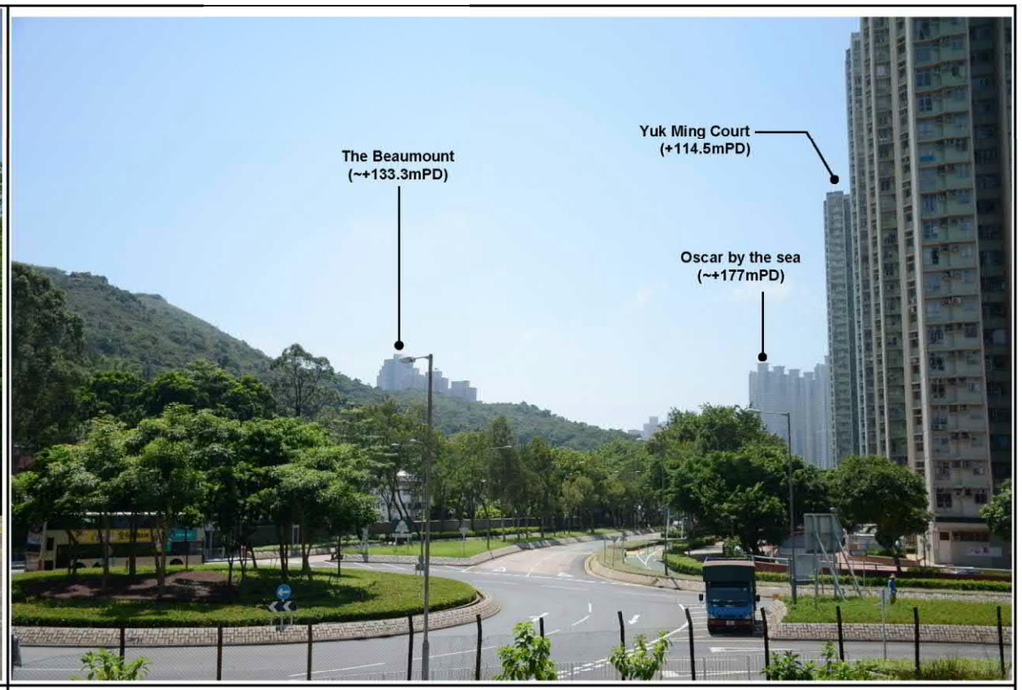
Existing View from VP6 - Silverstrand Beach Public Car Park



Existing View from VP7 - Tseung Kwan O Hospital



Photomontage from VP6 - Silverstrand Beach Public Car Park (with Housing Site)



Photomontage from VP7 - Tseung Kwan O Hospital (with Housing Site)

Note: The building height indicated at potential housing sites are the maximum building height (+mPD)

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Photomontage from VP6 & VP7

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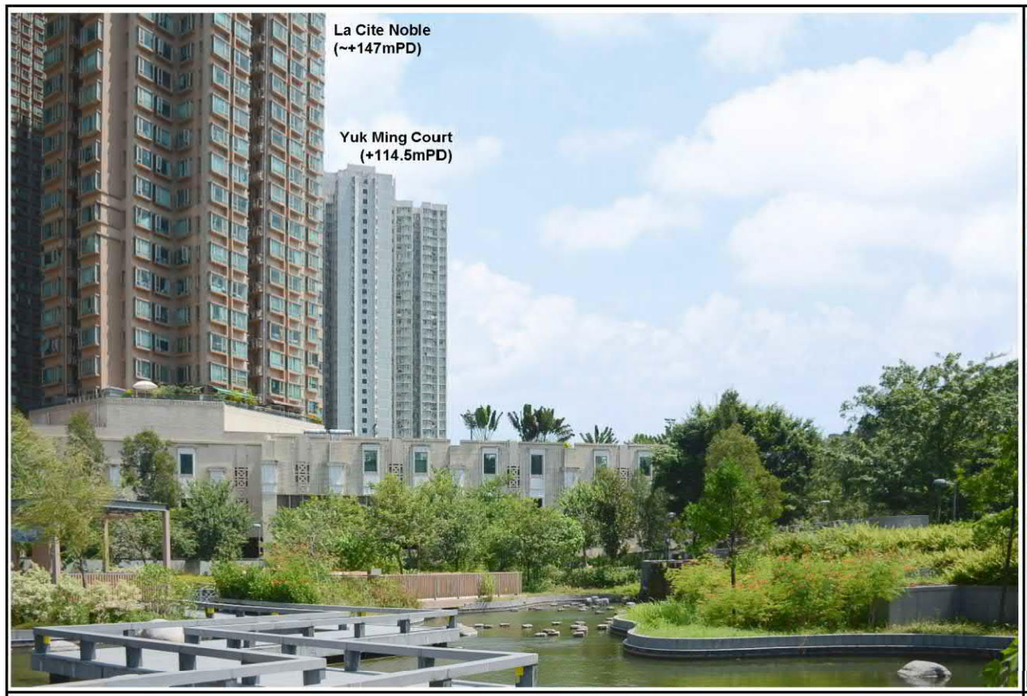
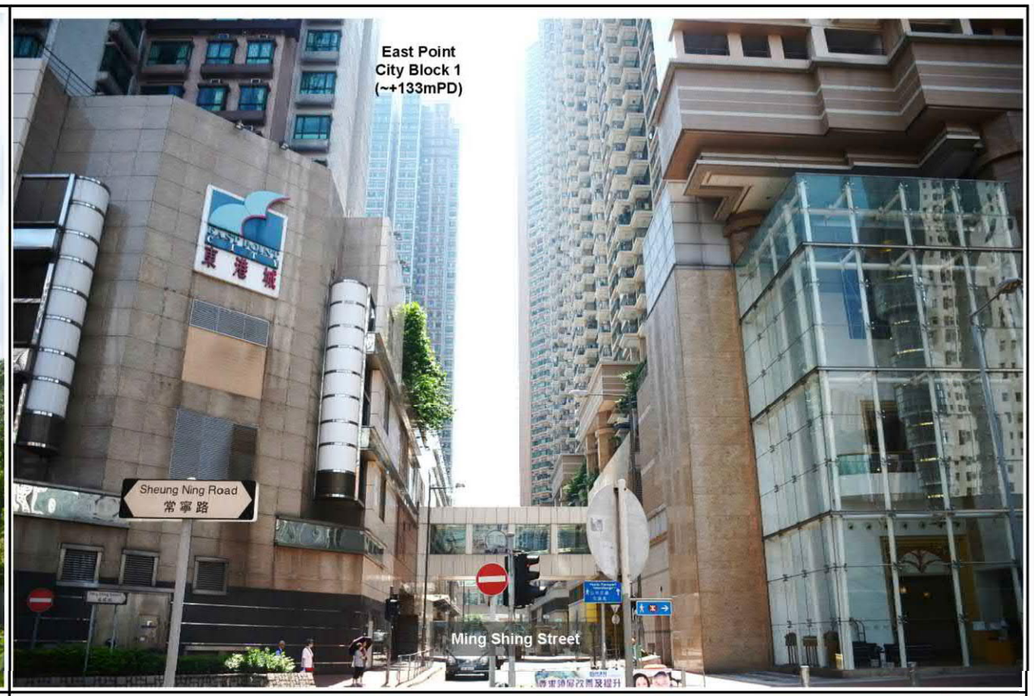


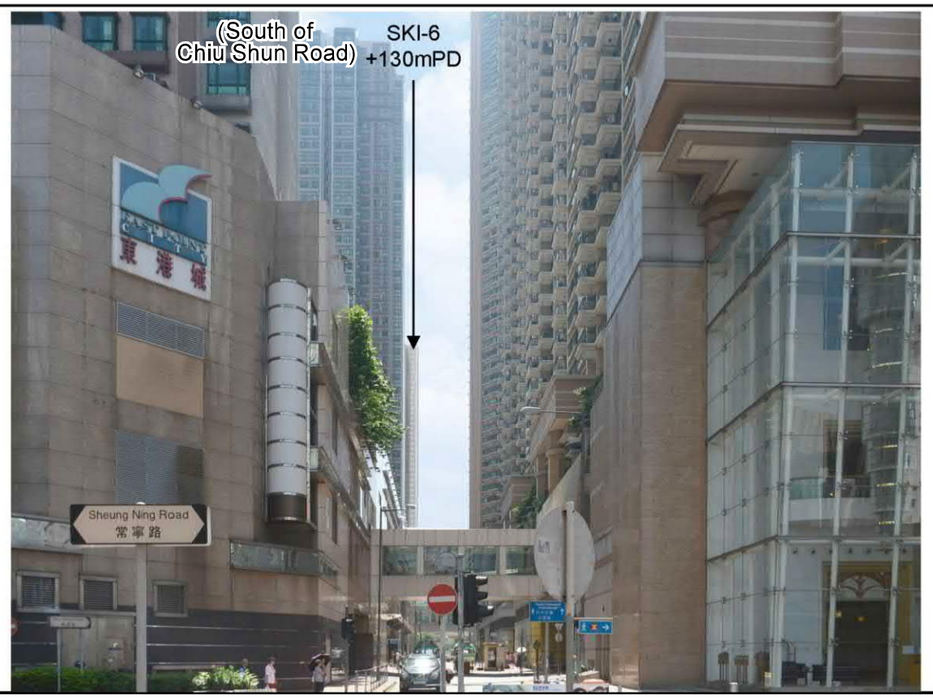
Existing View from VP9 - Hang Hau Man Kuk Lane Park (facing northeast)



Existing View from VP11 - Hau Tak Shopping Centre



Photomontage from VP9 - Hang Hau Man Kuk Lane Park (facing northeast)
(with Housing Site)



Photomontage from VP11 - Hau Tak Shopping Centre (with Housing Site)

Note: The building height indicated at potential housing sites are the maximum building height (+mPD)

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Photomontage from VP9 & VP11

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Existing View from VP12 - Tseung Kwan O Waterfront Promenade



Existing View from VP13 - Yau Yue Wan Village Playground



Photomontage from VP12 - Tseung Kwan O Waterfront Promenade (with Housing Site)



Photomontage from VP13 - Yau Yue Wan Village Playground (with Housing Site)

Note: The building height indicated at potential housing sites are the maximum building height (+mPD)

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Existing View from VP14 - Wilson Trail Stage 3 (Black Hill facing East)



Existing View from VP15 - Razor Hill



Existing View from VP14 - Wilson Trail Stage 3 (Black Hill facing East) (with Housing Site)



Photomontage from VP15 - Razor Hill (with Housing Site)

Note: The building height indicated at potential housing sites are the maximum building height (+mPD)

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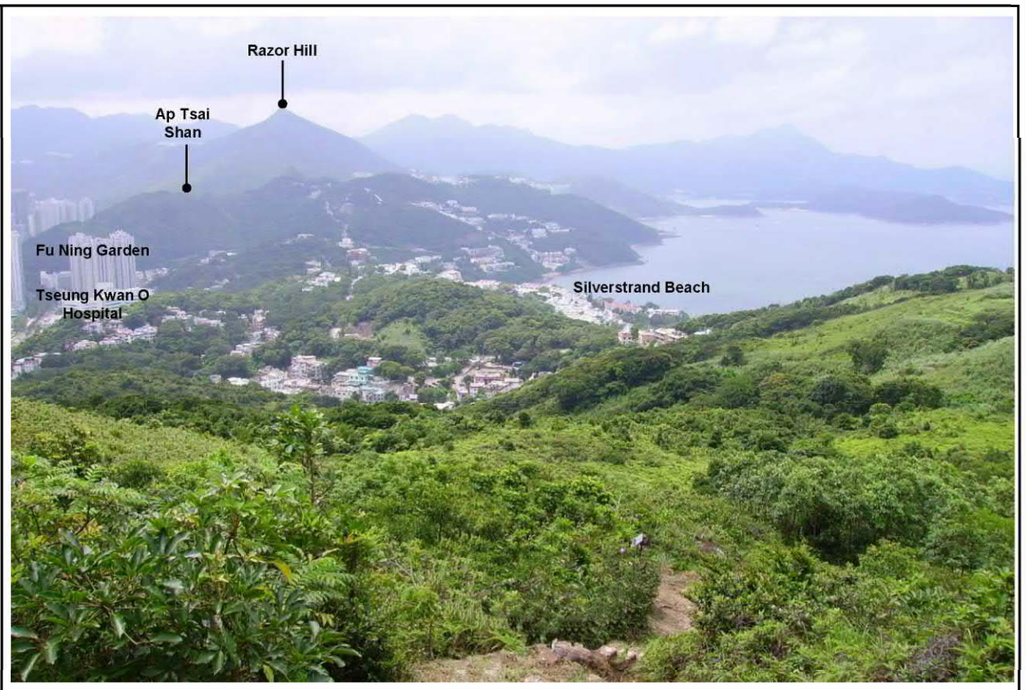
Existing View from VP16 – High Junk Peak



Existing View from VP17 - Clear Water Bay Country Park Trail



Photomontage from VP16 – High Junk Peak (with Housing Site)



Photomontage from VP17 - Clear Water Bay Country Park Trail (with Housing Site)

Note: The building height indicated at potential housing sites are the maximum building height (+mPD)

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Existing View from VP18 - Ap Tsai Shan (facing south)



Existing View from VP19 - Ap Tsai Shan (northwest)



Photomontage from VP18 - Ap Tsai Shan (facing south)
(with Housing Site)



Photomontage from VP19 - Ap Tsai Shan (northwest)
(with Housing Site)

Note: The building height indicated at potential housing sites are the maximum building height (+mPD)

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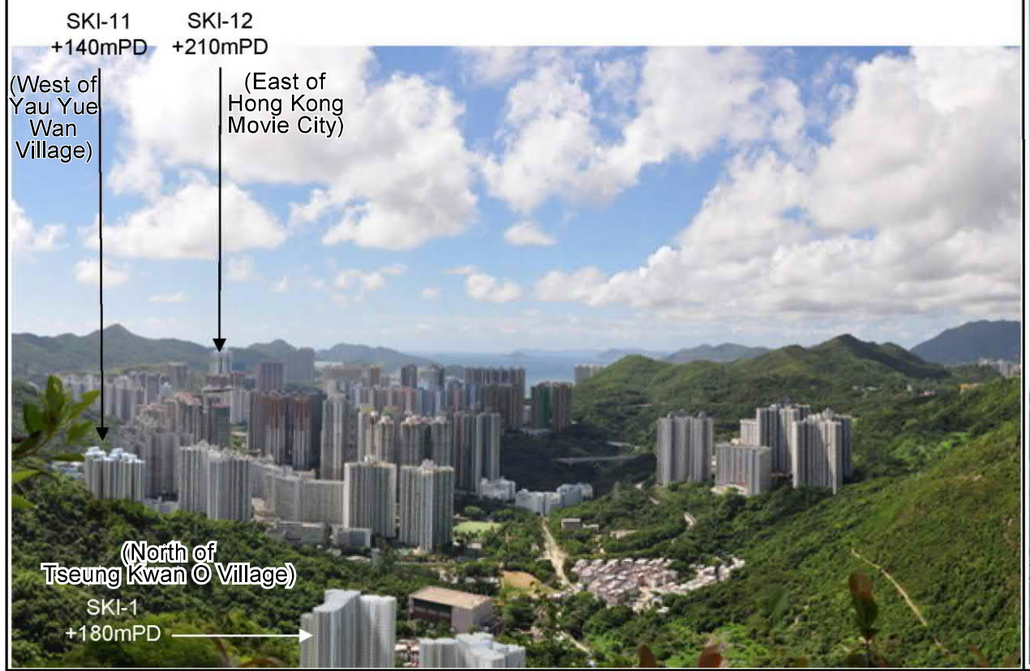
Existing View from VP20 - Wilson Trail Stage 3 (near Rise Park Villas)



Existing View from VP21 - Siu Sai Wan Promenade and Sports Ground



Photomontage from VP20 - Wilson Trail Stage 3 (near Rise Park Villas)
(with Housing Site)



Photomontage from VP21 - Siu Sai Wan Promenade and Sports Ground
(with Housing Site)

Note: The building height indicated at potential housing sites are the maximum building height (+mPD)

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Existing View from VP22 - Hang Fa Chuen Playground and Promenade



Photomontage from VP22 - Hang Fa Chuen Playground and Promenade
(with Housing Site)

Note: The building height indicated at potential housing sites are the maximum building height (+mPD)

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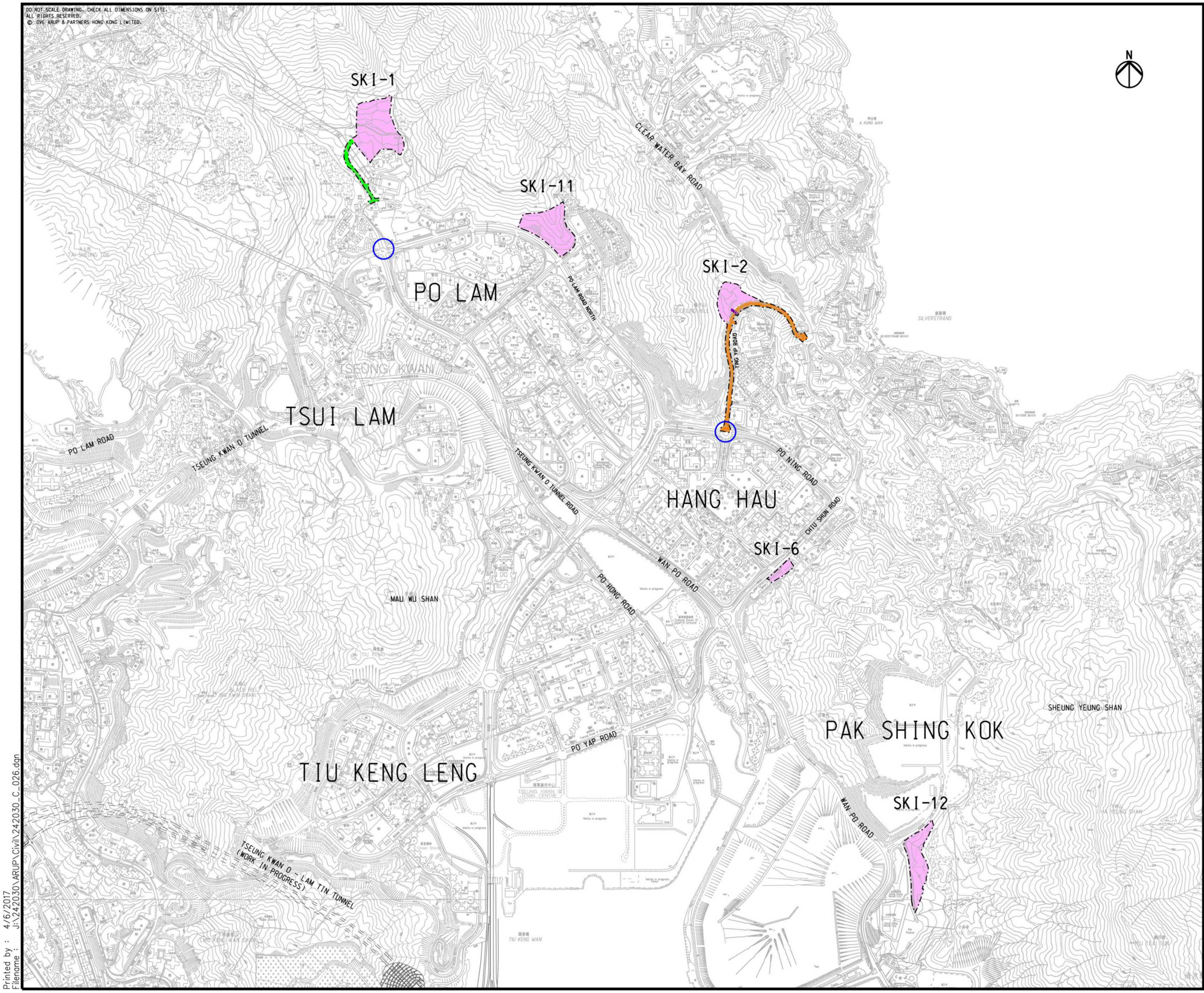

LEGEND:

- INITIAL INDICATIVE LAYOUT OF FIVE TKO HOUSING SITES
- PROPOSED ACCESS ROAD
- PROPOSED WIDENING WORKS OF EXISTING ROAD
- PROPOSED JUNCTION IMPROVEMENT WORKS
- PROPOSED FOOTBRIDGE

Rev	Description	By	Date

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Agreement No. CE 61/2014 (CE)

Site Formation and Infrastructural Works for Nine Housing Sites in Tseung Kwan O - Feasibility Study

Drawing title

PROPOSED TRAFFIC IMPROVEMENT WORKS - LOCATION PLAN

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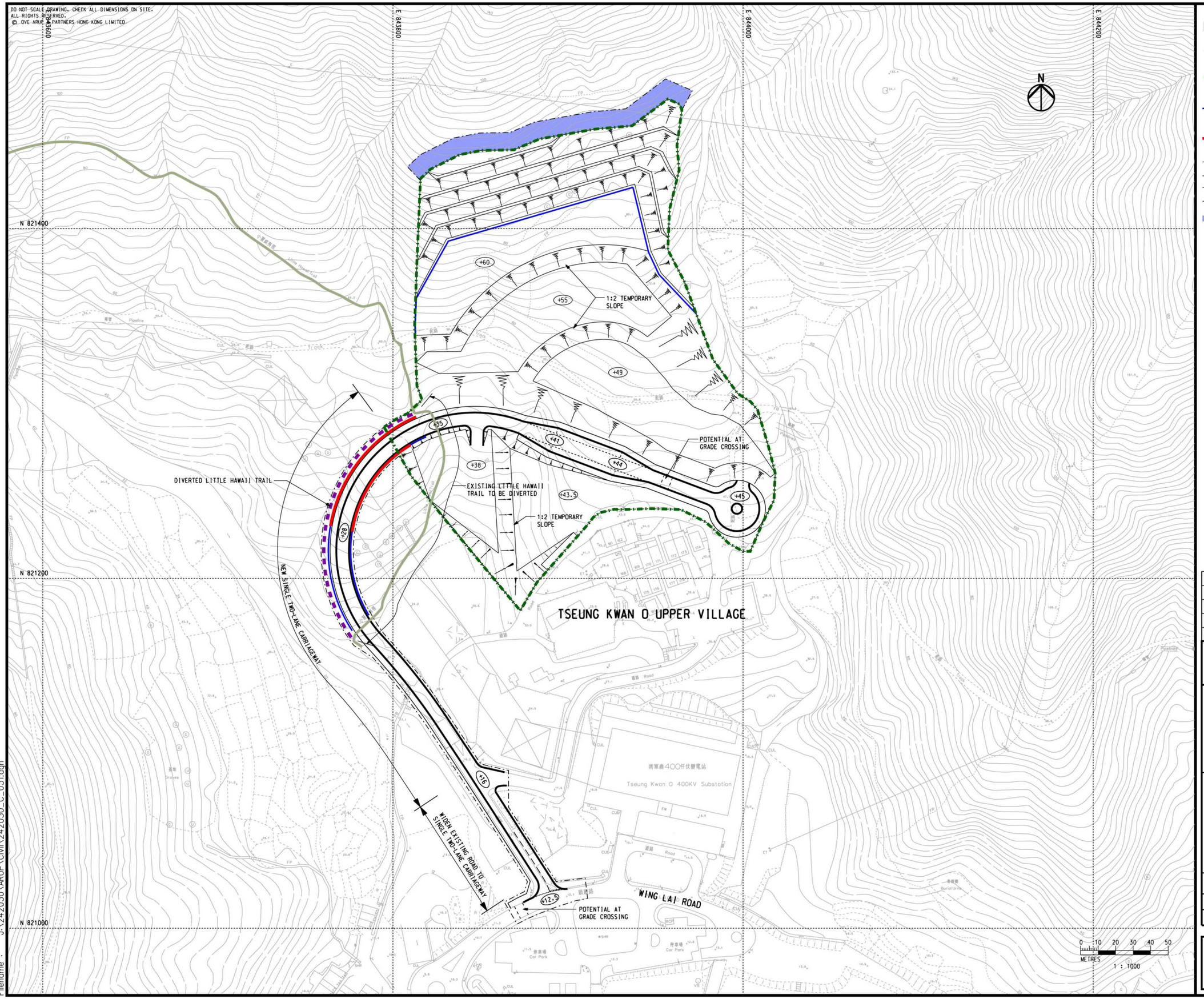

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- BOUNDARY FOR SITE FORMATION AND INFRASTRUCTURAL WORKS
- INDICATIVE LAYOUT OF HOUSING SITE
- PROPOSED L-SHAPED RC RETAINING WALL OR CANTILEVER SOLDIER PILE WALL (MAX. RETAINING HEIGHT OF 10m)
- PROPOSED BORED PILE WALL (MAX. RETAINING HEIGHT OF 22m)
- PROPOSED 1:1 CUT SLOPE
- PROPOSED 1:2 FILL SLOPE
- NATURAL TERRAIN HAZARD MITIGATION MEASURE
- (+45) PROPOSED PLATFORM LEVEL IN mPD.

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Contract No. and Title

Agreement No. CE 61/2014 (CE)

Site Formation and Infrastructural Works for Nine Housing Sites in Tseung Kwan O - Feasibility Study

Drawing title

PROPOSED SITE FORMATION SCHEME AT SITE SKI-1

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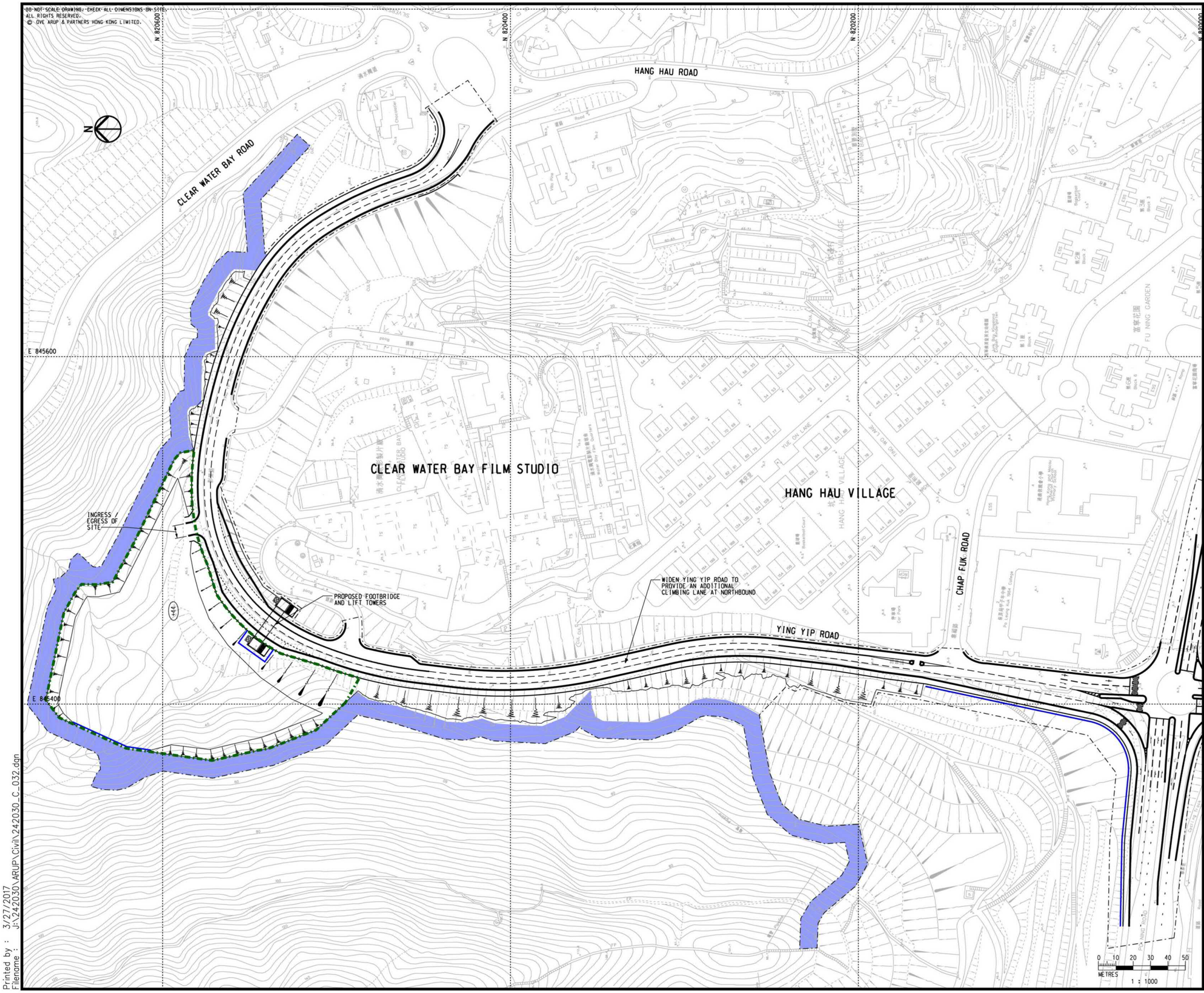

LEGEND:

- BOUNDARY FOR SITE FORMATION AND INFRASTRUCTURAL WORKS
- INDICATIVE LAYOUT OF HOUSING SITE
- PROPOSED L-SHAPED RC RETAINING WALL OR CANTILEVER SOLDIER PILE WALL (MAX. RETAINING HEIGHT OF 10m)
- PROPOSED BORED PILE WALL (MAX. RETAINING HEIGHT OF 22m)
- PROPOSED 1:1 CUT SLOPE
- PROPOSED 1:2 FILL SLOPE
- NATURAL TERRAIN HAZARD MITIGATION MEASURE
- (+45) PROPOSED PLATFORM LEVEL IN mPD.

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Site Formation and Infrastructural Works for Nine Housing Sites in Tseung Kwan O - Feasibility Study

Drawing title

PROPOSED SITE FORMATION SCHEME AT SITE SK1-2

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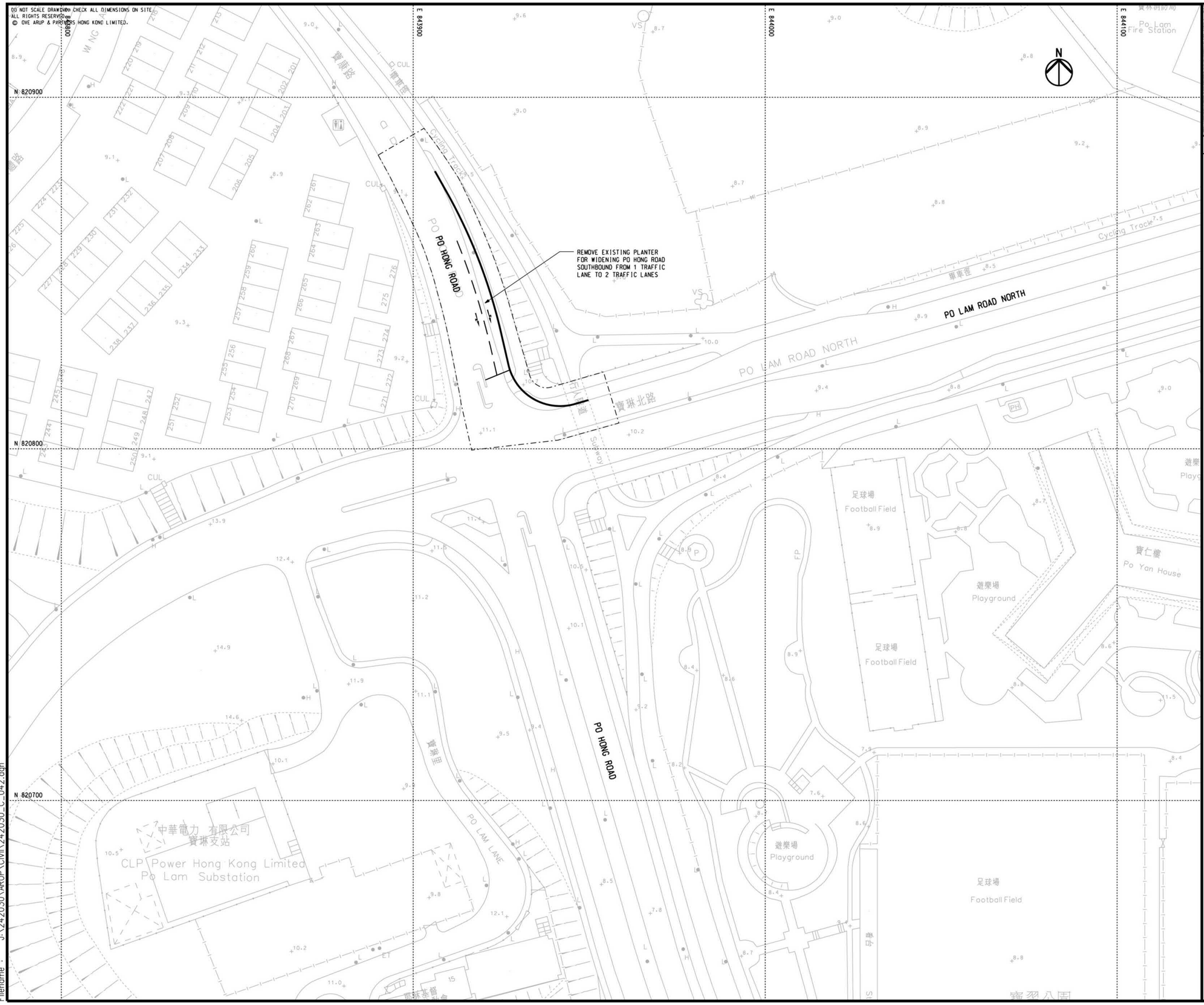

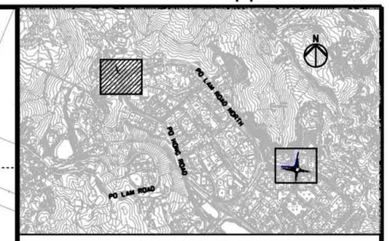

KEY LOCATION PLAN

LEGEND:

- JUNCTION IMPROVEMENT WORKS BOUNDARY
- PROPOSED RETAINING WALL
- PROPOSED 1:1 CUT SLOPE
- +45 PROPOSED PLATFORM LEVEL IN mPD.

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Agreement No. CE 61/2014 (CE)

Site Formation and Infrastructural Works for Nine Housing Sites in Tseung Kwan O - Feasibility Study

Drawing title

PROPOSED JUNCTION IMPROVEMENT SCHEME AT J/O PO LAM ROAD NORTH AND PO HONG ROAD

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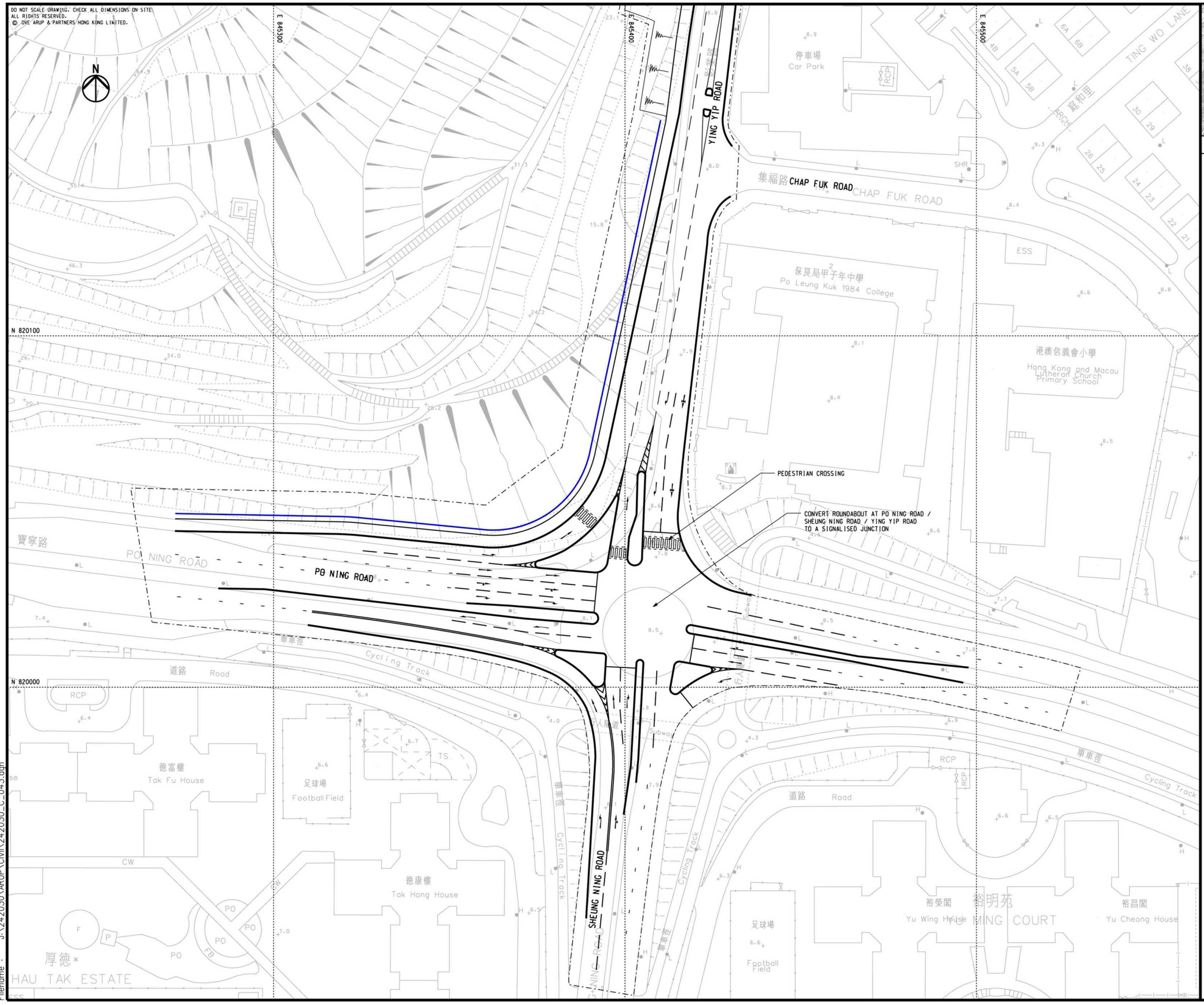

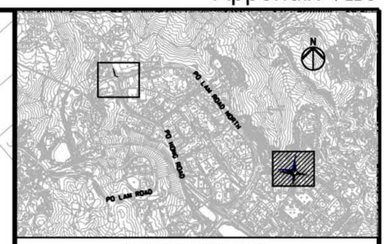

KEY LOCATION PLAN

LEGEND:

- JUNCTION IMPROVEMENT WORKS BOUNDARY
- PROPOSED RETAINING WALL
- PROPOSED 1:1 CUT SLOPE
- +45 PROPOSED PLATFORM LEVEL IN mPD.

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Contract No. and Title

Agreement No. CE 61/2014 (CE)
Site Formation and Infrastructural Works for Nine Housing Sites in Tseung Kwan O - Feasibility Study

Drawing title

PROPOSED JUNCTION IMPROVEMENT SCHEME AT J/O PO NING ROAD, YING YIP ROAD AND SHEUNG NING ROAD

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Appendix VIII of
RNTPC Paper No. 6/17

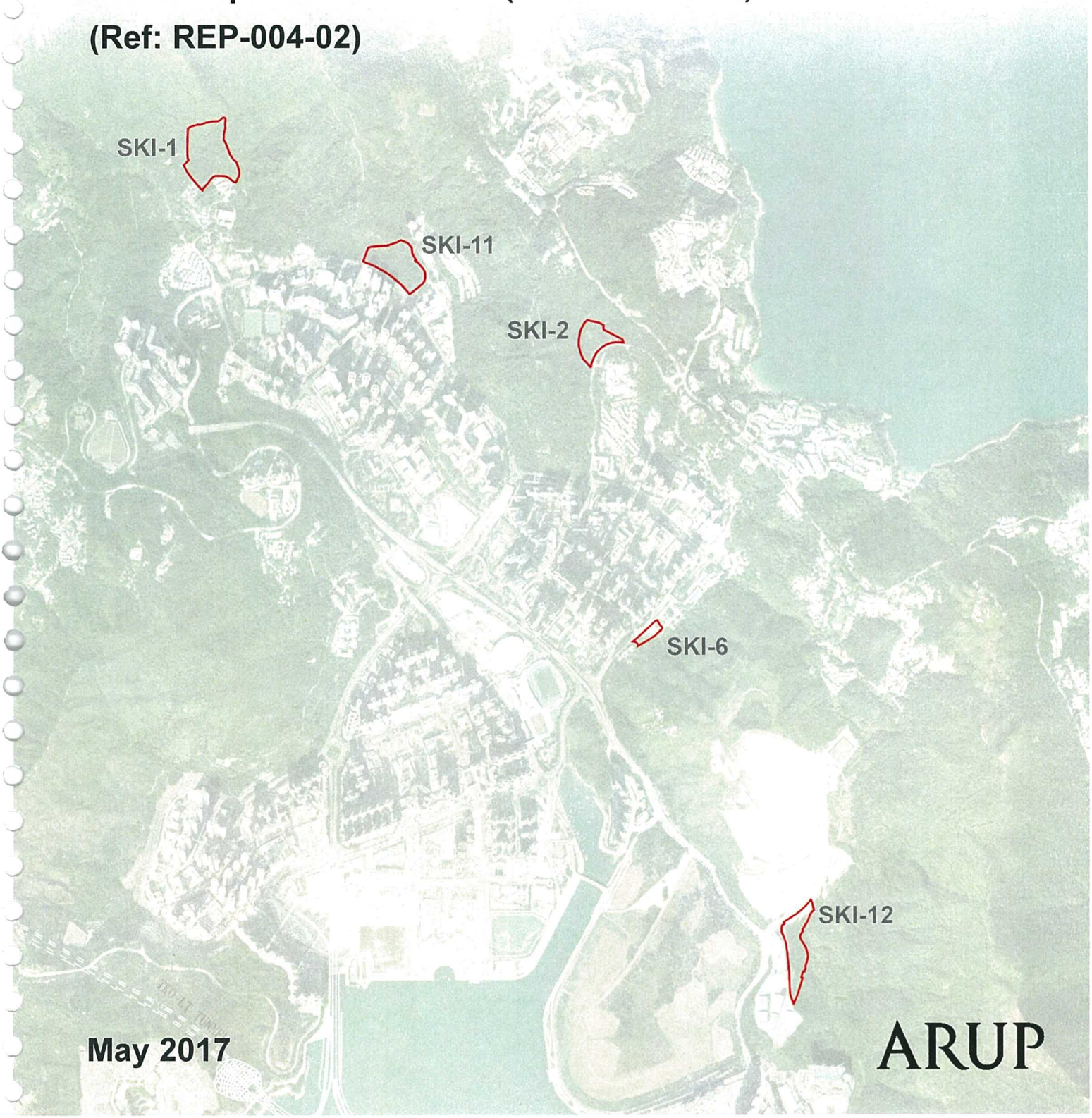
土木工程拓展署
Civil Engineering and Development Department

新界東拓展處
New Territories East Development Office

Agreement No. NTE/03/2015
Air ventilation and visual impact assessments for potential Housing sites in the vicinity of Tseung Kwan O – Feasibility Study

Visual Impact Assessment (Five TKO Sites) – Rev. 3

(Ref: REP-004-02)



May 2017

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Civil Engineering and Development Department

Agreement No. NTE/03/2015 Air ventilation and visual impact assessments for potential Housing sites in the vicinity of Tseung Kwan O - Feasibility Study

Visual Impact Assessment (Five TKO Sites) – Rev. 3

245001/02-REP-004-02

3rd Issue | May 2017

This report takes into account the particular instructions and requirements of our client.

It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

Job number 245001/02

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80 Tat Chee Avenue
Kowloon Tong
Kowloon
Hong Kong
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Figures

Appendices

Appendix A1

Example of Decorative Hoarding

Appendix A2

Conceptual Streetscape Design

Appendix A3

Typical Landscape Treatment on Slope

1 INTRODUCTION

1.1 Background

1.1.1 CEDD instructed Arup on 14 July 2015 under Agreement No. NTE/03/2015 –01 air ventilation and visual impact assessment for potential housing sites in the vicinity of Tseung Kwan O to consolidate the findings of the Assignment and prepare technical reports for rezoning of the aforesaid 5 potential housing sites.

(1) Site SKI-1, North of Tseung Kwan O Village;

(2) Site SKI-2, Northwest of Ying Yip Road;

(3) Site SKI-6, South of Chiu Shun Road;

(4) Site SKI-11, West of Yau Yue Wan Village; and

(5) Site SKI-12, East of Movie City.

1.1.2 The 5 potential housing sites are scattered in Tseung Kwan O and are currently mainly zoned "Green Belt" with minor portion of "G/IC" under the current Outline Zoning Plan.The housing sites comprise five residential sites at various locations in TKO as shown on Figure 1.1.

1.1.3 The proposed residential developments of five housing sites is a non-designated project under EIA ordinance (Cap.499). The visual impact assessment ('VIA') of the subject Study will be based on the provisions of the Town Planning Board ('TPB') *Guideline No. 41* on '*Submission of VIA for Planning Applications to the TPB*' ('*TPB-PG NO. 41*').

1.2 Nomenclature and Abbreviations

1.2.1 The following abbreviations are used throughout this report, unless otherwise stated:

ArchSD	Architectural Services Department, HKSARG
AFCD	Agriculture, Fisheries and Conservation Department, HKSARG
Arup	Ove Arup & Partners Hong Kong Limited
CEDD	Civil Engineering and Development Department, HKSARG
CEDD TC	Civil Engineering and Development Department Technical Circular
DIA	Drainage Impact Assessment
DLO	District Lands Office, LandsD
DR	Drainage Reserve
DSD	Drainage Services Department, HKSARG
E&M	Electrical and Mechanical
EEF	Energy Efficient Features
EIA	Environmental Impact Assessment
EM&A	Environmental Monitoring and Audit

EPD	Environmental Protection Department, HKSARG
ETWB TC(W)	Environment, Transport and Works Bureau Technical Circular (Works)
DEVB	Development Bureau, HKSARG
DEVB TC(W)	Development Bureau Technical Circular (Works)
GEO	Geotechnical Engineering Office, CEDD
GI	Ground Investigation
GIU	Geotechnical Information Unit
GLA	Government Land Allocation
GLTMS	Greening, Landscape and Tree Management Section, DEVB
HKSAR	Hong Kong Special Administrative Region
HKSARG	Government of HKSAR
HyD	Highways Department, HKSARG
LandsD	Lands Department, HKSARG
LCSD	Leisure and Cultural Services Department, HKSARG
LT	Laboratory Testing
NTHS	Natural Terrain Hazard Study
O&M	Operation and maintenance
PAH	Project Administration Handbook for Civil Engineering Works
PER	Preliminary Environmental Review
PlanD	Planning Department, HKSARG
RET	Renewable Energy Technologies
RPE(G)	Registered Professional Engineer (Geotechnical)
SIA	Sewerage Impact Assessment
TGLA	Temporary Government Land Allocation
TIA	Traffic Impact Assessment
TTA	Temporary Traffic Arrangement
WBTC	Works Branch Technical Circular
WSD	Water Supplies Department, HKSARG

2 VISUAL ASSESSMENT

2.1 Legislation, Standards and Guidelines

2.1.1 In preparation of this Report, reference has been made to the following technical circulars, practice notes and publications:

- Landscape and Visual Impact Assessment (LVIA) associated with the construction and operation of the Project:
- EIAO (Cap. 499. S16) and EIAO-TM, particularly Annexes 10 (Criteria for Evaluating Visual and Landscape Impact, and Impact on Sites of Cultural Heritage) and 18 (Guidelines for Landscape and Visual Impact Assessment);
- EIAO Guidance Note 8/2010 (Preparation of Landscape and Visual Impact Assessment under the EIAO);
- Town Planning Board Guidelines on Submission of Visual Impact Assessment for Planning Application to The Town Planning Board TPB PG-NO.41;
- Town Planning Ordinance (Cap131) and Town Planning (Amendment) Ordinance;
- Hong Kong Planning Standards and Guidelines (HKPSG) issued by PlanD, in particular Chapters 4, 10, 11 and Section 7 in Chapter 12 (As at August 2011);
- Forests and Countryside Ordinance (Cap 96);
- Country Park Ordinance (Cap 208);
- Land Administration Office Instruction (LAOI) Section D-12 Tree Preservation;
- DEVB TC(W) No. 2/2012 - Allocation of Space for Quality Greening on Roads;
- DEVB TC(W) No. 3/2012 - Site Coverage of Greenery for Government Building Projects;
- ETWB TCW No. 29/2004 - Registration of Old and Valuable Trees, and Guidelines for their Preservation;
- ETWB TCW No. 6/2015 - Maintenance of Vegetation and Hard Landscape Features;
- DEVB TCW No. 7/2015 - Tree Preservation;
- ETWB TC No. 17/2000 - Improvement to the Appearance of Slopes in Connection with ETWB TC 23/93;
- ETWB TCW No. 11/2004 - Cyber Manual for Greening;
- Urban Design Guidelines for Hong Kong issued by the PlanD (2003);
- CEDD TC No. 06/2014 - Vetting Committee on Slope Appearance
- Cyber Manual for Greening (GLTM of DEVB);
- Study on Landscape Value Mapping of Hong Kong;
- WBTC No. 7/2002 - Tree Planting in Public Works;
- GEO Publication No. 6/2007 - Updating of GEO Publication no. 1/2000 - Technical Guidelines on Landscape Treatment and Bio-engineering for Manmade Slopes and Retaining Walls;

- GEO 1/2011 - Technical Guidelines on Landscaping Treatment for Slopes. Tree Survey Methodology
- WBTC No. 36/2004 - Advisory Committee on the Appearance of Bridges and Associated Structures (ACABAS);
- Guidelines on Tree Transplanting (9/2014), GLTM of DEVB
- Guidelines on Tree Preservation during Development (4/2015), GLTM of DEVB
- Green Infrastructure, GLTM of DEVB - Website: http://www.greening.gov.hk/en/new_trend/green_infrastructure.html
- Measures on Tree Preservation, GLTM of DEVB - Website: http://www.trees.gov.hk/en/about_gltms/measures_on_tree_preservation/index.html
- Tree Maintenance and Management, GLTM of DEVB - Website: http://www.trees.gov.hk/en/about_gltms/tree_management_on_government_land/index.htm.

2.2 Relevant Outline Zoning Plan of Vicinity

2.2.1 A review has been undertaken of the current goals and objectives, statutory land-use and landscape planning designations for the Study Area. These have drawn upon information based up the Outline Zoning Plans.

- Approved Tseung Kwan O Outline Zoning Plan No – S/TKO/24 (24 March 2017)
- Approved Kwun Tong (North) Outline Zoning Plan No - S/K14N/15 (15 Jan 2016)
- Approved Clear Water Bay Peninsula North Outline Zoning Plan No – S/SK-CWBN/6 (3 Dec 2013)
- Approved Tseng Lan Shue Outline Zoning Plan No –S/SK-TLS/8 (14 Mar 2006)
- Approved Chai Wan Outline Zoning Plan No – S/H20/22 (18 Nov 2016)
- Approved Shau Kei Wan Outline Zoning Plan No - S/H9/18 (17 Apr 2015)

3 ASSESSMENT METHODOLOGY

3.1 Assessment Area

3.1.1 The assessment of visual impacts has involved the following procedures of Submission of Visual Impact Assessment ('VIA') for Planning Applications to the Town Planning Board' (*TPB PG-No. 41*).

3.1.2 The assessment area is expected to cover the area of visual influence within which the proposed development is pronouncedly visible from key sensitive viewers. The extent of the assessment area for VIA would vary case by case depending on the size of development, the site context and the distance and location of the sensitive viewers. A larger building will more likely give a more distinct visual impact than a smaller building at the same distance. Groups of buildings seen at a farther distance may be visually less distinct than the close-up views of individual buildings. The actual assessment area, i.e. the visual envelope, should be determined having regard to the size of the proposed development, the distance of the development and its potential visibility from the selected viewing points, and the actual site and surrounding topographical conditions by ground inspection.

3.1.3 The visual envelope is expected to cover the fields of views from all sensitive viewers in direct sight of the proposed development. Prior to the actual ground inspection, the assessment area can be approximated through topographic map analysis manually or by computer simulation. For harbourfront development, the assessment area may have to extend to the opposite side of the harbour and the ridgelines in the visual backdrop of the development. Likewise, areas where views to the proposed development are substantially blocked by buildings, structures, vegetation or topography in between can be excluded.

3.2 Viewing Points

3.2.1 Visual impact should take into account views from key strategic and popular local vantage points, as well as local visual impacts on the adjacent neighbourhood area. Important views to special landmarks, valued landscape features, the harbour, ridgelines, etc should be protected. In the highly developed context of Hong Kong, it is not practical to protect private views without stifling development opportunity and balancing other relevant considerations. In the interest of the public, it is far more important to protect public views, particularly those easily accessible and popular to the public or tourists. VIA should primarily assess the impact on sensitive public viewers from the most affected viewing points. The viewing points could be kinetic or static. They include key pedestrian nodes, popular areas used by the public or tourists for outdoor activities, recreation, rest, sitting-out, leisure, walking, sight-seeing, and prominent travel routes where travellers' visual attention may be caught by the proposed development. Viewing points should be at human eye level for a realistic presentation of views.

3.2.2 The visual sensitivity of the public viewers from the viewing points can be qualitatively graded as high, medium or low, taking into account the activity of the viewers, the duration and distance over which the proposed development would remain visible, and the public perception of value attached to the views being assessed.

3.2.3 For identification of key public viewing points, may refer to Chapter 11 on Urban Design Guidelines in the Hong Kong Planning Standards and Guidelines (HKPSG), the Explanatory Statements of relevant statutory plans, adopted outline development plans and layout plans, and completed planning studies available for public reference. Local viewpoints should be determined with reference to the setting of the project and views of

local significance areas may include prime entry points to city, waterfront, hillside, green spaces, ridgeline, spur, fish ponds, country parks, streams and rivers, popular vantage points and major view corridors, scenic land/water routes, hiking trails, rural land, urban fringe, parkland, recreational ground, resort, landmark spaces, historical and heritage sites, conservation areas etc.

3.3 Identification of Visual Elements

3.3.1 The visual outlook is shaped by the combined composition of all the visual elements which come into sight of the viewers. All key visual elements, including any major physical structures, visual resources or attractors (e.g. the harbour, natural coastline, ridgeline, mountain backdrop, woodland, streams, etc.) and/or visual eyesores or detractors (e.g. pylons, sewage treatment plants, refuse collection points, ventilation shaft buildings, quarries, etc.) that currently exist or are known to be planned within the assessment area should be reported. Different visual elements may enhance, degrade or neutralize the overall visual impact of the development being assessed.

3.3.2 Given the publicly recognized importance of the harbour and ridgelines as our natural visual resources, all VIAs should demonstrate whether and how the proposed development would cause impact on the views to ridgelines and harbour if the site location is within the assessment area where views to ridgelines and the harbour may be reduced or blocked.

3.4 Appraisal of Visual Changes

3.4.1 The effects of visual changes on the assessment area and sensitive public viewers should be appraised. Visual changes may be positive or negative and they are not necessarily mutually exclusive. The appraisal is expected to consider the following aspects.

(a) **Visual Composition** – Visual composition is the total visual effects of all the visual elements due to their variation in locations, massing, heights, dispositions, scales, forms, proportions and characters vis-a-viz the overall visual backdrop. Visual composition may result in visual balance, compatibility, harmony, unity or contrast. The appraisal should have due regard to the overall visual context and character within the wider and local contexts. A building of an inappropriate scale can dominate the setting and create visual incompatibility with the surrounding. However, in some areas, a well-designed building creating contrast in an appropriate setting may punctuate the space, add visual interest, break the visual monotony, provided other urban design principles applicable to the site are not negated.

(b) **Visual Obstruction** – A development may cause views in its foreground or background to be intercepted or blocked. The appraisal should assess the degree of visual obstruction and loss of views or visual openness due to the proposed development from all key public viewing points within the assessment area. Blockage or partial blockage of views which substantially reduce visual permeability, existing panorama, vistas, visual resources or visual amenities should be avoided or minimized, in particular with regard to impact on prominent ridgelines, the harbour, natural coastlines, open sea horizon, skyline, scenic areas, valued landscape, special landmark and heritage features to be preserved. The degree of visual obstruction can sometimes be reduced by repositioning of building blocks or scaling down building mass.

(c) **Effect on Public Viewers** – The effects of visual changes from key public viewing points with direct sightlines to the proposed development should be assessed and

demonstrated in VIA. The changes in views to the existing and future public viewers should be compared before and after the proposed development. The cumulative impact with any known planned developments as permitted by the statutory plans should be taken into account where possible. The appraisal should take into account the public perception of value attached to the views currently enjoyed, and any likely visual concerns from the general public, e.g. concerns on sore thumb development, visual permeability, wall effect, neighbourhood identity and character. In the likelihood of such public concerns, the appraisal should explain how to avoid or address the negative visual impact. The effects of the visual changes can be graded qualitatively in terms of magnitude as substantial, moderate, slight or negligible.

(d) **Effect on Visual Resources** - The condition, quality and character of the assessment area may change positively or negatively as a result of a development. The applicant should appraise if the proposed development may improve or degrade the condition, quality and character of the assessment area and any on-site and off-site visual impact such as that on the visual resources, visual amenities, areas of special character, natural and built heritage, sky view, streetscape, townscape and public realm related to the development. Any proposal to enhance or mitigate the impact through design measures, such as design to improve visual permeability, greening, streetscape improvement, landscape screening for visually intrusive elements e.g. carparks, plant rooms and retaining walls, should be included and presented.

3.4.2 **Evaluation of Overall Visual Impact:** The resultant overall impacts are concluded and classified within a range of thresholds:

The resultant overall impacts are concluded and classified within a range of thresholds:

(a) **enhanced** – the proposed development in overall terms will improve the visual quality and complement the visual character of its setting from most of the identified key public viewing points;

(b) **partly enhanced/partly adverse** – the proposed development will exhibit enhanced visual effects to some of the identified key public viewing points and at the same time, with or without mitigation measures, exhibit adverse visual effects on some other key public viewing points;

(c) **negligible** – the proposed development, with or without mitigation measures, will in overall terms, have insignificant visual effects on most of the identified key public viewing points, or the visual effects would be screened or filtered by other distracting visual elements in the assessment area;

(d) **slightly adverse** – the proposed development, with or without mitigation measures, will result in some overall negative visual effects on most of the identified key public viewing points;

(e) **moderately adverse** – the proposed development will, with or without mitigation measures, result in overall negative visual effects on most of the key identified key public viewing points; and

(f) **significantly adverse** – the proposed development will in overall terms cause serious and detrimental visual effects to most of the identified key public viewing points even with mitigation measures.

4 REVIEW OF PLANNING AND DEVELOPMENT CONTROL FRAMEWORK

4.1.1 The Outline Zoning Plan gazetted under the Town Planning Ordinance provides the statutory framework for land use development. Reference has been made to the OZPs No.: S/TKO/24 - Tseung Kwan O Outline Zoning Plan (gazetted on 24 March 2017). The Study Areas are mostly zoned as "Green Belt" (GB); except SKI-6 sites are zoned as GB and GIC. Therefore rezoning of OZP will be required for housing development. The study area of the proposed development are overlaid on the OZP is shown in **Figure 1.1** and their current zone is shown in **Table 4.1** below:

Table 4.1: Basic parameters of the Five housing sites

Site No.	Description of the Sites	Current Zoning	Proposed Zone	site area (Ha, about)	Maxi. Building Height +mPD	No. of flats
SKI-1	North of Tseung Kwan O Village	GB	R(A)	3.94	180	3700
SKI-2	Northwest of Ying Yip Road	GB	R(A)	1.48	170	1600
SKI-6	South of Chiu Shun Road	GB, GIC	R(A)	0.42	130	560
SKI-11	West of Yau Yue Wan Village	GB	R(A)	2.91	140	2500
SKI-12	East of Movie City (TKO Site 4), Sui Chik Sha	GB	R(A)	2.25	210	2900

5 VISUAL ELEMENTS

5.1 Visual Envelope

5.1.1 The visual envelope and popular local vantage points within the viewshed generally formed by ridgeline of Razor Hill (to the north), High Junk Peak (to the east), Black Hill and Mau Wu Shan (to the west) and the Victoria Harbour and other mountain ranges on Hong Kong Island of Pottinger Peak, Mount Collinson and Mount Parker (to the South). As Tseung Kwan O is a well-developed town with a number of existing developments, viewsheds for each individual potential housing site are also formed by their surrounding urban landscape context. Baseline of Key Visual Elements are illustrated in Figure **2.0** to **2.2**; and their photo are illustrated in **Figures 2.3** to **2.5**. Conceptual Layout Plans are illustrated in **Figures 4.1** to **4.5**, which are for assessment purpose only. Housing schemes will be further developed at detailed design stage.

5.1.2 Visual elements include visual resources or attractors (e.g. harbour, natural coastline, ridgeline, mountain backdrop, open sky and sea views etc.) and/or visual eyesores or detractors (e.g. visually prominent buildings, highly disturbed landscape features and quarries, etc). For the five potential housing sites, the key visual resources are the mountainous and coastal characters surrounding Tseung Kwan O Town, including High Junk Peak, Razor Hill, Black Hill and Mau Wu Shan and Junk Bay. The keys visual eyesores within visual envelope, including some ongoing construction sites at planned housing development at Anderson Road and Anderson Quarry, Development of Tiu Keng Leng and Tseung Kwan O Town Centre South, Planned Fire Service Training School cum driving School and Planned Residential Development at TKO Area 78 at Pak Shing Kok, and LOHAS Park Comprehensive development at area 86. Tseung Kwan O Landfill Restoration areas at the western side of Clear Water Bay Country Park are also visual detractor in the vicinity: Tseung Kwan O Landfill Stage 1 at Area 77, Tseung Kwan O Landfill Stage II/II at Area 105 and South East New Territories (SENT) Landfill and Fat Tong O Reclamation Works.

5.1.3 The five potential housing sites are located on the periphery of the TKO urban areas, these are a residual landscape type characteristic of the transition of landscapes from urban to rural. Typically on hillsides around urban edges that are steeply woodland and uneasily to be developed. Some winding roads, highways structures, slope works, hillsides (often stabilised, otherwise vegetated), scattered residential development, open space, GIC development (such as service reservoirs, fire stations, etc), cemeteries, landfills and quarry, etc. They are transitional visual characters which are characterised by significant vegetation cover and provide a green backdrop of the urban development. Aerial Photography is shown in **Figure 1.0**.

5.2 Selection of viewpoints

5.2.1 Selection of viewpoints location of are discussed and agreed with PlanD - in September 2015. The selection of representative viewpoints from key pubic viewers for photomontages are listed in **Table 5.1**:

Table 5.1: Proposed Public View Point and related potential housing sites

I.D	Key Public View Points	Relevant Potential Housing Sites
VP3	Decked Footpath connecting Po Lam MTR station to Tseung Kwan O Swimming Pool	SKI-1
VP5	Pavilion inside Po Tsui Park	SKI-1
VP6	Silverstrand Beach Public Car Park	SKI-2
VP7	Tseung Kwan O Hospital	SKI-6
VP9	Hang Hau Man Kuk Lane Park (facing northeast)	SKI-6
VP11	Hau Tak Shopping Centre	SKI-6
VP12	Tseung Kwan O Waterfront Promenade	SKI-12
VP13	Yau Yue Wan Village Playground	SKI-11
VP14	Wilson Trail Stage 3 (Black Hill)	SKI-12
VP15	Razor Hill	SKI-6, SKI-11, & SKI-12
VP16	High Junk Peak	SKI-12
VP17	Clear Water Bay Country Park Trail	SKI-1, & SKI-2 & SKI-11,
VP18	Ap Tsai Shan (facing south)	SKI-2
VP19	Ap Tsai Shan (facing northwest)	SKI-1 & SKI-11
VP20	Wilson Trail Stage 3 (near Rise Park Villas)	SKI-1, SKI-11 & SKI-12
VP21	Siu Sai Wan Promenade and Sports Ground	SKI-12
VP22	Hang Fa Chuen Playground and Promenade	SKI-12

6 APPRAISE VISUAL CHANGES

6.1 Urban Design Principles and Guidelines

6.1.1 The major visual elements, including visual resources and/or eyesores within each of the key views were coloured in or illustrated in solid lines in **Figures 2.0 – 2.2**. Major visual elements include open sky view, green backdrop / extensive landscaping, ridgelines and visually prominent built features / existing developments in the urban landscape context. The existing Photos of VPs are illustrated in **Figures 2.3** to **2.5**. Visual analysis of key viewpoints (VPs) are illustrated in **Figures 3.3** and **3.8.**

6.1.2 The quality of the subject views was further assessed and categorized as follows:

- Views towards positive visual elements / visual resources and desirable vistas were annotated in green. These views were not dominated by the existing townscape which could provide essential visual relief, orientation and a sense of nature to the public and should be preserved with high priority.
- Views towards positive visual resources / elements with a mixed of existing developments were annotated in yellow. Although these views are partially disturbed by existing developments, a significant part of the view remains unobstructed. Appropriate controls should be taken to prevent further degradation of these views.
- Views which are largely disturbed or blocked by existing developments were annotated in red.

Maintain Visual Openness

6.1.3 Tseung Kwan O is a well-developed town with a number of existing developments. It is utmost important to overcome the height dominance of the dense residential mass. Proper control over the building bulk and building height of the future residential developments should be introduced to minimize the blockage to the visual openness of open sky, ridgelines and sea view from VPs.

Preservation of Ridgeline

6.1.4 The visual resources of the area are dominated by high-rise buildings off-set against different mountain backdrop. In order to preserve the visual linkage between the VP and the ridgelines, building gaps / separations should be introduced in the future housing developments. It is normally considered that an effective building gap / separation should at least be 15 metres in width. Moreover, it is also recommended that the proposed building height of the future housing development should give a perception that it is visually comparable to that of the adjacent existing developments when viewed from respective VPs.

Respect Stepped Building Height Profile

6.1.5 Currently, stepped building height profile could be observed in the dense urban landscape context in Tseung Kwan O. This can enhance the unique relationship between the man-made environment and nature. Moreover, varying height profile with strategic disposition of low-rise and tall buildings in our dense urban context can promote visual interest and help instigate wind flowing throughout the district. The proposed building height of the future housing developments should respect the existing stepped building height profile where appropriate.

Maintain Tapering Height Profile

6.1.6 The tranquil characteristics of the urban/rural fringe between Tseung Kwan O Town and the surrounding area should be duly respected when formulating the most preferred scheme for the potential housing sites. Future housing developments have to adapt a tapering height profile which could create a more pleasant and harmonious context with the natural backdrop, ridgelines, open sky and sea views in visual terms.

6.2 Visual Analysis of Key Viewpoints

Due to distinctive visual features for different potential housing sites, analysis and frameworks for each individual VP is conducted and the analyses/recommendations. Visual analysis of key viewpoints (VPs) are illustrated in Figures 3.3 to 3.8.

VP3: Decked Footpath connecting Po Lam MTR station to Tseung Kwan O Swimming Pool

6.2.1 VP3 is located to the southeast of Po Lam MTR Station. It connects Po Lam MTR Station with surrounding residential developments, such as King Lam Estate, and recreational facilities, such as Tseung Kwan O Swimming Pool, Tseung Kwan O Indoor Games Hall and Tseung Kwan O Library. It is easily accessible and heavily used by the public. Moreover, there are a number of sitting-out areas along the footpath, and are used by the public as a popular social gathering place. The VP is able to demonstrate the potential visual impact of housing site No. SKI-1 which is located to the northwest of this VP with a viewing distance of about 1400m. The existing view of this VP is composed of existing residential developments adjacent to Po Lam MTR station at the foreground, as well as the ridgeline of Razor Hill at the background. The existing photo of this VP is illustrated in **Figure 2.3.** Baseline of key visual elements is illustrated in **Figure 2.1**. Visual analysis of key viewpoints (VPs) is illustrated in **Figure 3.3**. Given the number of individuals are many, the viewing distance is long and the duration of visual impact is long of recreational and occupational users. Overall this group of VPs is considered to have **medium** sensitivity.

VP5: Pavilion inside Po Tsui Park

6.2.2 VP5 is located in Po Tsui Park, which is a major public park in Po Lam area of Tseung Kwan O (Plans 1 and 2a). It is easily accessible and heavily used by the public, especially residents of surrounding residential developments such as Po Lam Estate. The VP is able to demonstrate the potential visual impact of housing site No. SKI-1 which is located to the north of this VP with a viewing distance of about 800m. The existing view of VP5 is largely formed by open sky view and the ridgeline of Razor Hill. A part of Po Lam Estate is also visible from this VP. The existing photo of this VP is illustrated in **Figure 2.3**. Baseline of key visual elements is illustrated in **Figure 2.1**. Visual analysis of key viewpoints (VPs) is illustrated in **Figure 3.3.** This recreational visitors currently have glimpse and partial view only as park features has provided most of the screening toward SKI-1; the viewing distance is medium and their duration of impact and number of individuals are medium. Overall, this group of VSRs is considered to have **medium** sensitivity.

VP6: Silverstrand Beach Public Car Park

6.2.3 VP6 is located adjacent to the Silverstrand Beach. It is publicly accessible, and frequently used by public who visit the Silverstrand Beach, and visitors to the Silverstrand Beach Shopping Centre next to the public car park. VP6 is able to demonstrate the potential visual impact of housing site No. SKI-2 which is located to the northwest of this VP with a viewing distance of about 700m. The existing view of this VP is mostly formed by ridgeline, open sky and green backdrop, with a few residential developments at the western end. The existing photo of this VP is illustrated in **Figure 2.3**. Baseline of key visual elements is illustrated in **Figure 2.1**. Visual analysis of key viewpoints (VPs) is illustrated in **Figure 3.3**. These recreationalists and travellers are dominated by the foreground of their view towards the Study Area. The existing views with medium distance towards proposed SKI-2 are partially blocked by woodland vegetation. Their duration of impact and number of individuals are medium. Overall this group of VPs is considered to have **medium** sensitivity.

VP7: Tseung Kwan O Hospital

6.2.4 VP7 is located at the entrance of Tseung Kwan O Hospital (Plans 1 and 2c), and is easily accessible and frequently visited by public and staff of the hospital. This VP is able to demonstrate the potential visual impact of housing site No. SKI-6 which is located to the southwest of this VP with a viewing distance of about 520m. The existing view of VP7 is formed by a number of existing residential developments on the right, open sky and ridgeline on the left. The existing photo of this VP is illustrated in **Figure 2.3**. Baseline of key visual elements is illustrated in **Figure 2.1**. Visual analysis of key viewpoints (VPs) is illustrated in **Figure 3.3**. Given the number of individuals are very many, the viewing distance is medium and the duration of visual impact is long for visitors and occupational users. Overall this group of VPs is considered to have **medium** sensitivity.

VP9: Hang Hau Man Kuk Lane Park (facing northeast)

6.2.5 VP9 is located in Hang Hau Man Kuk Lane Park facing northeast is located adjacent to the existing residential developments in Hang Hau. It is frequently visited by recreational users, as well as pedestrians between Tseung Kwan O Town Centre and Hang Hau. VP9 is able to demonstrate the potential visual impact of housing site No. SKI-6 to the east of this VP with a viewing distance of about 240m. The existing view is formed by a mixture of existing residential developments, park landscape and open sky view. The existing photo of this VP is illustrated in **Figure 2.3**. Baseline of key visual elements is illustrated in **Figure 2.1**. Visual analysis of key viewpoints (VPs) is illustrated in **Figure 3.4**. This recreational visitors currently have partial view, as park features has dominated most of the views toward SKI-6; the viewing distance is medium and their duration of impact and number of individuals are medium. Overall, this group of VSRs is considered to have **medium** sensitivity.

VP11: Hau Tak Shopping Centre

6.2.6 VP11 is located at the entrance of Hau Tak Shopping Centre. It is easily accessible and frequently visited by public travelling between Hau Tak Shopping Centre / Hau Tak Estate and Hang Hau MTR Station. The VP is able to demonstrate the potential visual impact of housing site No. SKI-6 with a viewing distance of about 300m. The existing view of this VP is dominated by existing residential and commercial developments of

East Point City and Residence Oasis, with a narrow open sky visual corridor along Ming Shing Street and Ngan O Road towards the ridgeline at the background. The existing photo of this VP is illustrated in **Figure 2.3**. Baseline of key visual elements is illustrated in **Figure 2.1**. Visual analysis of key viewpoints (VPs) is illustrated in **Figure 3.4**. This shoppers and visitors currently have partial view toward SKI-6; the viewing distance is medium and their duration of impact and number of individuals are low. Overall, this group of VSRs is considered to have **low** sensitivity.

VP12: Tseung Kwan O Waterfront Promenade

6.2.7 VP12 is located at the southern part of Tseung Kwan O Town Centre. It is easily accessible and frequently visited by the public, especially recreational users of the promenade. The VP is able to demonstrate the potential visual impact of housing site No. SKI-12 with a viewing distance of about 1200m. The existing view of this VP is an open view, dominated by the ridgeline of High Junk Peak and open sky, with much natural vegetation. Some residential developments including LOHAS Park and The Beaumount are at the eastern end. The existing photo of this VP is illustrated in **Figure 2.3**. Baseline of key visual elements is illustrated in **Figure 2.1**. Visual analysis of key viewpoints (VPs) is illustrated in **Figure 3.4**. This recreational visitors currently have full view toward SKI-12; the viewing distance is long and their duration of impact and number of individuals are medium. Overall, this group of VSRs is considered to have **medium** sensitivity.

VP13: Yau Yue Wan Village Playground

6.2.8 VP13 is located at the playground adjacent to Yau Yue Wan Village. It is easily accessible and frequently visited by recreational users. This VP is able to demonstrate the potential visual impact of housing site No. SKI-11, which is located to the immediate west of this VP with a viewing distance of about 60m. Currently, this VP enjoys an open view of the pitch with natural landscape, open sky and the ridgeline and a glimpse of some existing developments including Ying Ming Court and FSD Tseung Kwan O Rank and File Married Quarters. The existing photo of this VP is illustrated in **Figure 2.3**. Baseline of key visual elements is illustrated in **Figure 2.1**. Visual analysis of key viewpoints (VPs) is illustrated in **Figure 3.4**. This recreational visitors currently have full view toward SKI-12; the viewing distance is short and their duration of impact and number of individuals are medium. Overall, this group of VSRs is considered to have **medium** sensitivity.

VP14: Wilson Trail Stage 3 (Black Hill)

6.2.9 VP14 is located at the hiking trail adjacent to Wilson Trail Stage 3. It is a popular hiking path and frequently visited by recreational users. This VP is on elevated viewing point (at about +283 mPD) and able to demonstrate the potential visual impact of housing site No. SKI-12, which is located to the far east of this VP with a viewing distance of about 3520m. Currently, VP14 enjoys a panorama view with the natural landscape of Black Hill at the foreground, Tiu Keng Leng urban development area in the middle ground, and the open sky and ridgeline of High Junk Peak at the background. The existing photo of this VP is illustrated in **Figure 2.3**. Baseline of key visual elements is illustrated in **Figure 2.1**. Visual analysis of key viewpoints (VPs) is illustrated in **Figure 3.5.** This recreational visitors currently have glimpse view toward SKI-12 as distance is very far (3.5km); their duration of impact is short and number of individuals are very few. Overall, this group of VSRs is considered to have **low** sensitivity.

VP15: Razor Hill

6.2.10 VP15 is located at the hiking trail adjacent to Razor Hill. It is a popular hiking path and frequently visited by hikers. This VP is on elevated viewing point (at about +432 mPD) with open sky view and able to demonstrate the potential visual impact of housing sites No. SKI-6, SKI-11 and SKI-12, which is located to the south of this VP with a viewing distance range of about 1100 - 4200m. The existing view is characterized by the natural landscape of Razor Hill at the foreground, a mixture of Tseung Kwan O urban development and ridgelines of Ap Tsai Shan and Mau Wu Shan in the middle, and the ridgelines of High Junk Peak, open sky and sea view of Junk Bay at the background. The existing photo of this VP is illustrated in **Figure 2.4**. Baseline of key visual elements is illustrated in **Figure 2.1**. Visual analysis of key viewpoints (VPs) is illustrated in **Figure 3.5**. This recreational visitors currently have glimpse view toward most of developments as distance is vast (1100 to 4200m); their duration of impact is short and number of individuals are very few. Overall, this group of VSRs is considered to have **low** sensitivity.

VP16: High Junk Peak

6.2.11 VP16 is located at the most famous hiking trail at Sai Kung District namely High Junk Peak. It is very popular hiking path and frequently visited by hikers. This VP is on elevated viewing point (at about +344 mPD) and able to demonstrate the potential visual impact of housing sites No. SKI-12 at the foreground visually coalesce with TKO Town Centre. Currently, VP16 is dominated by ridgelines, open sky view and existing Tseung Kwan O urban development, Junk Bay and Hong Kong Island as the key visual resources from this VP. The existing photo of this VP is illustrated in **Figure 2.4**. Baseline of key visual elements is illustrated in **Figure 2.1**. Visual analysis of key viewpoints (VPs) is illustrated in **Figure 3.5**. This recreational visitors currently have glimpse view toward the Project as distance is vast (900m); their duration of impact is short and number of individuals are very few. Overall, this group of VSRs is considered to have **low** sensitivity.

VP17: Clear Water Bay Country Park Trail

6.2.12 VP17 is located at Clear Water Bay Country Park Trail at Sai Kung District. It is a popular hiking path and frequently visited by hikers. This VP is on elevated viewing point (at about +260 mPD) and able to demonstrate the potential visual impact of housing sites No. SKI-1, SKI-2 and SKI-11, which is located to the northwest of this VP with a viewing distance range of about 3000 - 4800m. Currently, VP17 is dominated by ridgelines, open sky and sea panorama view of Sliverstrand at the northeast of Tseung Kwan O urban area. The existing photo of this VP is illustrated in **Figure 2.4**. Baseline of key visual elements is illustrated in **Figure 2.1**. Visual analysis of key viewpoints (VPs) is illustrated in **Figure 3.5**. This recreational visitors currently have glimpse view toward the SKI-1, SKI-2 and SKI-11 as distance is vast (3000 to 4800m); their duration of impact is short and number of individuals are very few. Overall, this group of VSRs is considered to have **low** sensitivity.

VP18: Ap Tsai Shan (facing south)

6.2.13 VP18 is located at local mountain in between Hang Hau and Po Lam east namely Ap Tsai Shan. It is easily accessible and frequently visited by local residents for morning

exercise. This VP is on elevated viewing point (at about +140 mPD) and able to demonstrate the potential visual impact of housing site No. SKI-2, which is located to the immediate southeast of this VP with a viewing distance of about 500m. Currently, VP18 enjoys view of Hang Hau townscape, open sky and Clear Water Bay Country Park landscape. The existing photo of this VP is illustrated in **Figure 2.4**. Baseline of key visual elements is illustrated in **Figure 2.1**. Visual analysis of key viewpoints (VPs) is illustrated in **Figure 3.6**. This recreational visitors currently have full view toward SKI-2; the viewing distance is medium and their duration of impact and number of individuals are medium. Overall, this group of VSRs is considered to have **medium** sensitivity.

VP19: Ap Tsai Shan (facing northwest)

6.2.14 VP19 is located at local mountain in between Hang Hau and Po Lam east namely Ap Tsai Shan, which is about 500m northeast of SKI-11 and about 1100m east of SKI-1. It is easily accessible and frequently visited by local residents for morning exercise and recreation activities. This VP is on elevated viewing point (at about +120 mPD) and able to demonstrate the potential visual impact of housing sites No. SKI-1 and SKI-11. Currently, VP19 enjoys view of a mixture of natural landscape and Tseung Kwan O townscape at the foreground, and open sky and ridgelines of Tai Sheung Tok and Kowloon Peak at the background. The existing photo of this VP is illustrated in **Figure 2.4**. Baseline of key visual elements is illustrated in **Figure 2.1**. Visual analysis of key viewpoints (VPs) is illustrated in **Figure 3.6**. This recreational visitors currently have full view toward SKI-11; the viewing distance is medium and their duration of impact and number of individuals are medium. Overall, this group of VSRs is considered to have **medium** sensitivity.

VP20: Wilson Trail Stage 3 (near Rise Park Villas)

6.2.15 VP20 is located at Wilson Trail Stage 3 hiking trail adjacent to Rise Park Villas near Razor Hill. It is a popular hiking path accessible and frequently visited by hikers. This VP is on elevated viewing point (at about ++240 mPD) and able to demonstrate the potential visual impact of housing sites No. SKI-1, SKI-11 and SKI-12 all of the sites are located to the south of this VP with a viewing distance range of about 720 - 5300m. Currently, VP20 enjoys an open sky panorama view of Tseung Kwan O mountainous landscape with splendid vista of Tseung Kwan O urban landscape and fringe areas, and glimpse view of Junk Bay and ridgelines of High Junk and Mau Wu Shan at the background. The existing photo of this VP is illustrated in **Figure 2.4**. Baseline of key visual elements is illustrated in **Figure 2.1**. Visual analysis of key viewpoints (VPs) is illustrated in **Figure 3.6**. Most existing views towards the Project are glimpse as very far away from the Study Area. It will not visually obstructive or be easy caught by attention. The number of individuals is very few and the duration of impact is short for these recreational visitors. Overall, this VSR group is considered to have **low** sensitivity.

VP21 & VP22: Siu Sai Wan Promenade and Sports Ground and Hang Fa Chuen Playground and Promenade

6.2.16 VP21 & VP22 are located at the waterfront along Siu Sai Wan and Hang Fa Chuen respectively. Approximately ~ 5500m closest distance away to SKI-12. It is easily accessible and frequently visited by the public, especially recreational users of the promenade. The VP is able to demonstrate the potential visual impact of housing site No.

SKI-12. The existing view of this VP is an open sky panorama view, dominated by the entire townscape of Tseung Kwan O with ridgeline of High Junk Peak, Devil's Peak and Razor Hill as greenery backdrop and natural visual setting. The existing photo of this VP is illustrated in **Figure 2.4**. Baseline of key visual elements is illustrated in **Figure 2.2**. Visual analysis of key viewpoints (VPs) is illustrated in **Figure 3.6 & 3.7**. The closest distance ~5.5km away from the Study Area with Junk Bay set in between both entities. Both VPs are on the HK island side have only partial views towards the Project. Given the large number of individuals, medium duration impact and nature of recreational users, this VSR group is considered to have **medium** sensitivity

6.2.17 The conceptual layout plans for five potential housing sites as illustrated in **Figures 4.1** to **4.5**.

7 EVALUATE OVERALL VISUAL IMPACT

7.1 Mitigation Measures

7.1.1 The assessment on the impacts to VPs from key public view points has been conducted before and after the mitigation measures are implemented and proposed mitigation measures will be prior arrangement or agreement between departments on the maintenance responsibility in accordance to ***DEVB TCW 6/2015***. The agreement and approval of the implementation, management and maintenance agencies of the Project will be sought from relevant parties during detailed design stage of the project. They are summarized at **Table 7.1** below:

Table 7.1 Proposed mitigation measures for five potential housing sites

Construction Phase	
CM1	Minimise works area, site formation works and tree felling
CM2	Construction period reduced to practical minimum
CM3	Construction traffic (land and sea) reduced to practical minimum
CM4[1]	Erection of decorative mash or hoardings to screen undesirable views during construction
CM5	Avoidance of excessive height and bulk of temporary site buildings and structures
CM6	Control of night-time lighting
Operation Phase	
OM1	All above-ground structures shall be sensitively designed in term of scale, height and bulk (visual recessive)
OM2	Use appropriate building materials and colours in built structures
OM3	Lighting units to be directional and minimise unnecessary light spill and glare
OM4[2]	Implementation of greening measures e.g. roadside planting and provision of green coverage within the proposed development
OM5[3]	Sensitive design of streetscape, vertical greening, landscape treatment on slope and buffer zone should be compatible with surrounding context
OM6	Disturbed Area during construction shall be reinstated

NOTE:
1: Example of decorative hoardings refer to **Appendix A1**
2: The greening ratio for all housing sites will comply with Sustainable Building Design Guidelines (**PNAP APP152**) and Site Coverage of Greenery for Government Building Projects (**DEVB TCW No. 3/2012**).
3: Conceptual Streetscape Design and Landscape Treatment on Slope refer to **Appendix A2** and **A3** accordingly.

Photomontage Viewpoints

7.1.2 Based on the location of the proposed five housing development, **Figures 2.0** to **2.2** shows 17 VPs of the photomontages within the visual envelope. Photomontages are demonstrated in **Figures 5.1** to **5.10**; which have been used as points to make up photomontages to illustrate the visual impact of the Project. Significance of visual impacts are summarised in **Table 7.2**.

7.1.3 ***Magnitude of Impact in VPs***

7.1.4 **VP3**: This VP is at the decked footpath connecting Po Lam MTR station to Tseung Kwan O Swimming Pool, which is easily accessible and popular to the commuters walking to / from the Po Lam MTR station. The photomontage to illustrate the possible visual impact of the proposed public housing development is at **Figure 5.1**. The ridgeline of Razor Hill which is the major visual resources of the area at the background will be partially blocked by potential housing sites No. SKI-1 (~1400m viewing distance). The disposition of the

SKI-1 is visually coalesce with existing residential development (i.e. The Metropolis, Po Lam Estate). The open sky view is preserved and no significant blockage to the visual openness. Since VP3 is dominated by urban development, magnitude of change would be **slight**. (Refer to **Figure 5.1**). This slight magnitude of change when combined with the medium sensitivity of the public viewers will result in a slightly adverse visual impact.

7.1.5 **VP5**: This VP is located in the pavilion inside Po Tsui Park which is about 800m south of housing site SKI-1. VP5 is easily accessible and heavily visit by recreational users, especially residents of surrounding developments such as Po Lam Estate (~240m viewing distance). No visual obstruction to the ridgeline of Razor Hill has been made. The proposed building height from potential housing site No. SKI-1 seen as comparable to that of Po Lam Estate and as its extension when viewed from VP5 (~800m viewing distance). Site No. SKI-1 is quite far apart from this viewpoint, it will not block the visual openness towards the open sky and ridgeline at the background. Magnitude of change would be **slight.** (Refer to **Figure 5.1**). This slight magnitude of change when combined with the medium sensitivity of the public viewers will result in a slightly adverse visual impact.

7.1.6 **VP6**: This VP is located at the Silverstrand Beach Public Car Park, about 700m east of the housing sites No. SKI-2. This VP represents the views of recreational visitors towards to the housing sites No. SKI-2. It is frequently used by public who visit the Silverstrand Beach, and visitors to the Silverstrand Beach Shopping Centre next to the public car park. The photomontage to illustrate the possible visual impact of the proposed public housing development is at **Figure 5.2**. The proposed building height from potential housing sites No. SKI-2 (+170mPD) is protruded from top of the ridgeline and the existing residential developments at the western side (at about +136mPD). SKI-2 will be slightly obstructed over existing dense woodland of Ap Tsai Shan. The building mass and height of these housing blocks are still visually intrusive from VP6 (~700m viewing distance). Part of the open sky view are moderately obstructed and visually incompatible with setting. Magnitude of change would be **moderate**. (Refer to **Figure 5.2**). This moderate magnitude of change when combined with the medium sensitivity of the public viewers will result in a moderately adverse visual impact.

7.1.7 **VP7**: This VP is at the Tseun Kwan O Hospital which is about 520m northeast to the housing site No. SKI-6. This view point represents the views of public and staff of the hospital, and is easily accessible and frequently viewed by public and staff of the hospital. The photomontage to illustrate the possible visual impact of the proposed public housing development is at **Figure 5.2**. The proposed building height from potential housing site No. SKI-6 is confined within the tapering height profile formed by Yuk Ming Court (at about +114.5mPD) Oscar by the sea (+177mPD) and The Beaumount (at about +133.3mPD). However, the standalone building structure still create visual intrusiveness when viewed from VP7 (~520m viewing distance). The building mass of the housing site No. SKI-6 will block substantial part of the open sky view. Visually incompatible with the natural hillside landscape and open sky view are moderately obstructed. Magnitude of change would be **moderate**. (Refer to **Figure 5.2**). This moderate magnitude of change when combined with the medium sensitivity of the public viewers will result in a moderately adverse visual impact.

7.1.8 **VP9**: This VP is located at Hang Hau Man Kuk Lane Park which is about 240m west of housing site SKI-6. This view point represents the views of park users toward the proposed housing site SKI-6. The photomontage to illustrate the possible visual impact of the proposed public housing is in **Figure 5.3**. Similar to VP7, however VP9 is much closer distance to when viewed towards potential housing site No. SKI-6 which is ~240m away easterly from VP9. The proposed building height from potential housing site No.

SKI-6 (+130mPD) seen as comparable to that of Yuk Ming Court (+114.5mPD) when viewed from this VP. The building mass of SKI-6 will partially block part of the sky view. SKI-6 seen as an extension of existing developments (from the podium level of La Cite Noble) and the visual openness of this VP is moderately degraded. Park landscape and open sky view are disturbed. However, no visual resources, like ridgelines would be affected. Magnitude of change would be **moderate**. (Refer to **Figure 5.3**). This moderate magnitude of change when combined with the medium sensitivity of the public viewers will result in a moderately adverse visual impact.

7.1.9 **VP11**: This VP is located at Hau Tak Shopping Centre in Sheung Ning Road, which is 300m northwest of housing site No. SKI-6, and is easily accessible and frequently visited by public walking to / from Hau Tak Shopping Centre / Hau Tak Estate and Hang Hau MTR Station (~300m viewing distance). The photomontage to illustrate the possible visual impact of the proposed public housing is in **Figure 5.3**. Residential blocks of East Point City and Residence Oasis have occupied most of the photomontage, and with the linear view corridor in the middle of the view. This linear view corridor is slightly blocked by potential housing site No. SKI-6 at the background through Ming Shing Street and Ngan O Road. The location of the building block has been shifted as far as possible so as to minimize the disturbance to the existing open sky view along Ngan O Road. However, with the presence of existing site limitation, namely, sewerage reserve for existing 2250 dia. Sewer and Important Tree, *Ficus microcarpa* (Height 15m, spread 20m, DBH 2000mm), there are little opportunity for the housing block to maneuver the orientation and block location so as to maintain the open sky view. No significant visual obstruction to nearby visual resources is caused by the proposed housing site No. SKI-6. The view corridor provides visual relief in this rather congested environment and will be largely preserved. SKI-6 would not be visually overwhelming and undesirable as only partially blocked when view from VP11. Overall, visual permeability is maintained. Magnitude of change would be **slight**. (Refer to **Figure 5.3)**. This slight magnitude of change when combined with the low sensitivity of the public viewers will result in a slightly adverse visual impact.

7.1.10 **VP12**: This viewpoint is located at the Tseung Kwan O Waterfront Promenade, about 1200m west of the housing site No. SKI-12. It is popular to the recreational users for jogging along the waterfront promenade, and is easily accessible and frequently visited by the residents in the vicinity. This viewpoint represents the views of recreational users towards the proposed housing site No. SKI-12. The photomontage to illustrate the possible visual impact of the proposed public housing is in **Figure 5.4**. The building mass of No. SKI-12 is protruded peculiarly at the middle ground next to the residential developments, such as The Beaumount and LOHAS Park, when viewed fromVP12. It is considered that SKI-12 development will dominate the natural hillside landscape in the vicinity, which will disrupt and incompatible with the surrounding environment. Part of the sky view are disturbed partially by the building blocks. The continuity of ridgeline (Clear Water Bay Country Park - Miu Tsai Tun section) is an essential visual relief/ vista will be is partially disturbed. A sense of nature to the public and openness are substantially obstructed. Magnitude of change would be **substantial**. (Refer to **Figure 5.4**). This substantial magnitude of change when combined with the medium sensitivity of the public viewers will result in a significantly adverse visual impact.

7.1.11 **VP13**: This VP is located at the Yau Yue Wan Village Playground, which is 60m east from the site. It is easily accessible and frequently visited by recreational users. The potential housing site No. SKI-11 will block most of the open sky view and the view of the hill at the backdrop when viewed from VP13. The photomontage to illustrate the possible visual impact of the proposed public housing is in **Figure 5.4**. Proposed building

height (+140mPD) is similar within neighbouring development Ying Ming Court (~+114.5mPD) and FSD Tseung Kwan O Rank and File Married Quarters (~+86mPD). SKI-11 are visually degraded substantially when viewed from VP13 as their distance are very close to each other (~60m viewing distance) and substantially loss of open sky view. Magnitude of change would be **substantia**l. (Refer to **Figure 5.4**). This substantial magnitude of change when combined with the medium sensitivity of the public viewers will result in a significantly adverse visual impact.

7.1.12 **VP14**: It is a popular hiking path and frequently visited by recreational users. High level of VP14 offers a broad view towards the potential housing site No. SKI-12 (~3520m viewing distance). The existing building blocks of Kin Ming Estate (at about +141mPD) and Metro Town (at about +165mPD) will be the key visual element at the foreground. SKI-12 is very far away and is visually coalesce with neighbouring development (i.e LOHAS Park at ~+208mPD respectively). The ridgeline of Clear Water Bay Country Park and open sky as an important visual resources are preserved, while views towards greenery backdrops would be slightly reduced; the proposed development on Site No. SKI-12 would cause slight loss of views towards the greenery backdrop and magnitude of change would be **slight**. (Refer to **Figure 5.5**). This slight magnitude of change when combined with the low sensitivity of the public viewers will result in a slightly adverse visual impact.

7.1.13 **VP15**: this VP is at the high point of Razor Hill. It is a popular hiking path and frequently visited by recreational users, and has a panoramic view over the Tseung Kwan O Town Centre. This VP represents the views of recreational users towards the Tseung Kwan O Town Centre and the overall potential housing sites No. SKI-6, SKI-11 & SKI-12 (viewing distance ranging from 1100 – 4200m). The photomontage to illustrate the possible visual impact of the proposed public housing is in **Figure 5.5**. When viewed from the VP at Razor Hill, the proposed housing development are shown into several clusters of building masses over the dense urbanized Tseung Kwan O Town Centre. The building mass and structures will unavoidably create loss of hillside woodland and greenery, which is significant visual resources of the area. Ridgeline of the hillside woodland at the foothill area is partially blocked. The current view corridor from this VP (at Razor Hill) is preserved. There is no undesirable views or visually overwhelming and visual permeability is maintained. The future housing blocks are visually compatible with and harmonious with the general building profile in Tseung Kwan O urban setting when viewed from VP15. No visual obstruction to the open sky view has been made. Magnitude of change would be **slight**. (Refer to **Figure 5.5**). This slight magnitude of change when combined with the low sensitivity of the public viewers will result in a slightly adverse visual impact.

7.1.14 **VP16**: this VP is at the High Junk Peak. It is the most famous hiking trail at Sai Kung District namely High Junk Peak. The photomontage to illustrate the possible visual impact of the proposed public housing is in **Figure 5.6**. The proposed building height of potential housing sites SKI-12 (~900m viewing distance) is the key visual impact when viewed from VP16; which seen as comparable same height and bulk to the adjacent residential developments, such as The Beaumount and LOHAS Park. No visual obstruction to the open sky view has been made. However, there would be slight loss of visual openness and views towards greenery backdrop. Magnitude of change would be **slight**. (Refer to **Figure 5.6**). This slight magnitude of change when combined with the low sensitivity of the public viewers will result in a slightly adverse visual impact.

7.1.15 **VP17**: this VP is at the Clear Water Bay Country Park Trail. It is popular to the public for hiking and has a panoramic view over the Hang Hau and Silverstrand Beach. This

view point represents the views of recreational users towards the proposed developments. The proposed building height of the potential housing sites No. SKI-1, SKI-2 and SKI-11 (viewing distance ranging from ~3000 – 4800m) are seen as incompatible to adjacent rural setting when viewed from this elevated view point. Part of the view of Ap Tsai Shan at the backdrop is blocked by the building mass of SKI-2, while SKI-1 & SKI-11 are hardly noticeable. No visual obstruction to the open sky view has been made. The ridgelines of Razor Hill as an important visual resource in the vicinity are preserved and open sky/ visual setting are maintained. Magnitude of change would be **slight**. (Refer to **Figure 5.6**). This slight magnitude of change when combined with the low sensitivity of the public viewers will result in a slightly adverse visual impact.

7.1.16 **VP18**: this VP is located at Ap Tsai Shan, which is about 500m northwest of proposed housing site SKI-2. This view point represents the views of recreational users, and is easily accessible and frequently visited by local residents for morning hiking exercise. The photomontage to illustrate the possible visual impact of the proposed public housing is in **Figure 5.7**. The proposed building mass and height of SKI-2 will block substantial the mountain view and open landscape context view. Compared to nearby low rise village housings of Hang Hau Village, the building blocks are visually prominent and will impose significant visual impact and obstruction when viewed from this view point. It is seen as incomparable to that of the adjacent rural setting when viewed from elevated VP. Further, part of the sky view are disturbed by the building block. Magnitude of change would be **substantial**. (Refer to **Figure 5.7**). This substantial magnitude of change when combined with the medium sensitivity of the public viewers will result in a significantly adverse visual impact.

7.1.17 **VP19**: This view point is at the Ap Tsai Shan, which is easily accessible and frequently visited by local residents for morning exercise for recreation activities; similar as VP18. The photomontage to illustrate the possible visual impact of the proposed public housing development is in **Figure 5.7**. Elevated location of this VP offers a broad view towards the overall potential housing sites No. SKI-1 and SKI-11 (viewing distance ranging from 500 – 1100m). Residential blocks of Ying Ming Court, Tsui Lam Estate and FSD Tseung Kwan O Rank and File Married Quarters have occupied most of the foreground when viewed from this VP19. The building mass and structures will unavoidably create loss of hillside woodland and greenery which is significant visual resources of the area. Ridgeline of the hillside woodland at the foothill area is partially blocked. The current view corridor from this VP (at Ap Tsai Shan) is preserved. There is no undesirable views or visually overwhelming and visual permeability is maintained. No visual resources of open sky view will be disturbed. The future housing blocks are visually compatible with surrounding urban setting when viewed from VP19. There is only minimum visual changes from SKI-11 as the close distance to VP. Magnitude of change would be **slight**. (Refer to **Figure 5.7**). This slight magnitude of change when combined with the medium sensitivity of the public viewers will result in a slightly adverse visual impact.

7.1.18 **VP20**: similar as VP15, however over looking at western view of TKO town. This high level of this VP is in a popular hiking path accessible and frequently visited by hikers; which offers a broad view towards the overall potential housing sites No. SKI-1, SKI-11 and SKI-12 (viewing distance ranging from ~720 – 5200m). The photomontage to illustrate the possible visual impact of the proposed public housing development is in **Figure 5.8**. The building masses and structures will unavoidably create loss of hillside woodland and greenery; which is significant visual resources of the area. The current view corridor from this VP (at Razor Hill near Rise Park Villas) is preserved. There are no undesirable views or visually overwhelming and visual permeability is maintained.

The future housing blocks are visually coalesce with surrounding urbanized setting of Tseung Kwan O Town Centre when viewed from VP20. No visual resources of open sky view will be disturbed. The sea view and ridgeline as an important visual resources in the vicinity are preserved. Magnitude of change would be **slight**. (Refer to **Figure 5.8**). This slight magnitude of change when combined with the low sensitivity of the public viewers will result in a slightly adverse visual impact.

7.1.19 **VP21** & **VP22**: these view point are located at the Siu Sai Wan Promenade and Hang Fa Chuen Playground respectively. They are popular to local residents for leisure jogging along the waterfront promenade and have a panoramic view over the Junk Bay. The photomontage to illustrate the possible visual impact of the proposed public housing development is in **Figure 5.8 & 5.9**. The proposed building height of potential housing site No. SKI-12 (~5500m viewing distance) which is very far distance from VPs; therefore SKI-12 is seen as comparable to the adjacent residential developments, such as The Beaumount and LOHAS Park, when viewed from such distance. The building height and mass of the future residential development is visually coalesce with overall setting. No visual resources of open sky view will be disturbed. The ridgelines of High Junk Peak/ Miu Tsai Tun and Clear Water Bay Country Park as an important visual vista in the background are preserved. However, there would be slight loss of views towards greenery backdrops. Magnitude of change would be **slight.** (Refer to **Figure 5.8 & 5.9**). This slight magnitude of change when combined with the medium sensitivity of the public viewers will result in a slightly adverse visual impact.

Table 7.2 Significance of Visual Impacts. (Note: All impacts are adverse unless otherwise noted with beneficial).

VP ID	Description	Source of Impact from Site No.	Viewing Distance (m)	Visual Composition	Visual Obstruction	Effect On Public Viewers	Effect On Visual Resources	Residual Visual Impact
VP3	Decked Footpath connecting Po Lam MTR station to Tseung Kwan O Swimming Pool	SKI-1	1400	building mass & scale are compatible with surrounding visual setting	Ridgeline of Razor Hill is partially blocked; no significant blockage to the open sky and visual openness	View is slightly disturbed by proposed site	Slight visual impact by minimum visual changes, dominate/ degrade with adjacent visual resources	Combined with the medium sensitivity of the public viewers, residual visual impact is slightly adverse.
VP5	Pavilion inside Po Tsui Park	SKI-1	800	building mass & scale are compatible with surrounding visual setting	Open sky and key ridgeline are mainly preserved and no blockage to the visual openness.	View is slightly disturbed by proposed site	Slight visual impact by minimum visual changes, dominate/ degrade with adjacent visual resources	Combined with the medium sensitivity of the public viewers, residual visual impact is slightly adverse.
VP6	Silverstrand Beach Public Car Park	SKI-2	700	Building mass & height are protruded from natural hillside landscape, visually incompatible with setting	Open sky view and greenery of Ap Tsai Shan are partially blocked; moderately reduce visual permeability	View is moderately disturbed by proposed site	Moderate visual changes by partially loss of greenery and openness	Combined with the medium sensitivity of the public viewers, residual visual impact is moderately adverse.
VP7	Tseung Kwan O Hospital	SKI-6	520	Building height are protruded from adjacent visual element, visually incompatible with setting	Open sky view is partially disturbed; moderately loss of openness	View is moderately disturbed by proposed site	Moderate visual changes by partially loss of greenery and openness	Combined with the medium sensitivity of the public viewers, residual visual impact is moderately adverse.
VP9	Hang Hau Man Kuk Lane Park (facing northeast)	SKI-6	240	Building mass & height are protruded from urban park landscape, visually dominated with setting	Open sky view and greenery of park view are partially blocked; moderately loss of openness	View is moderately disturbed by proposed site	Moderate visual changes by partially loss of greenery and openness	Combined with the medium sensitivity of the public viewers, residual visual impact is moderately adverse.
VP11	Hau Tak Shopping Centre	SKI-6	300	building mass & scale are compatible with surrounding visual setting	Linear sky view are mainly preserved and no blockage to the visual openness.	View is slightly disturbed by proposed site	Slight visual impact by minimum visual changes, dominate/ degrade with adjacent visual resources	Combined with the low sensitivity of the public viewers, residual visual impact is slightly adverse.

VP ID	Description	Source of Impact from Site No.	Viewing Distance (m)	Visual Composition	Visual Obstruction	Effect On Public Viewers	Effect On Visual Resources	Residual Visual Impact
VP12	Tseung Kwan O Waterfront Promenade	SKI-12	1200	Building mass & height are protruded from natural hillside landscape, visually incompatible with setting	Loss of openness, prominent ridgeline of Miu Tsai Tun/ Clear Water Bay Country Park is largely blocked	View is substantially disturbed by proposed site	Substantial visual change by largely loss of greenery and openness	Combined with the medium sensitivity of the public viewers, residual visual impact is significantly adverse.
VP13	Yau Yue Wan Village Playground	SKI-11	60	Located at very closed to VP13; proposed building mass dominated viewing corridor and setting create visual incompatible with surroundings	Loss of openness and open sky view is largely blocked	View is substantially disturbed by proposed site	Substantial visual change by largely loss of openness	Combined with the medium sensitivity of the public viewers, residual visual impact is significantly adverse.
VP14	Wilson Trail Stage 3 (Black Hill)	SKI-12	3520	Located at very far to hikers VP14; no dominate to any visual element	No blockage of view	View is slightly disturbed by proposed sites	Slight visual impact by minimum visual changes, dominate/ degrade with adjacent visual resources	Combined with the low sensitivity of the public viewers, residual visual impact is slightly adverse.
VP15	Razor Hill	SKI-6, SKI-11 & SKI-12	1100 - 4200	Located at very far to hikers VP15; no dominate to any visual element	Ridgeline of Mau Wu Shan is slightly blocked; no significant blockage to the visual openness	View is slightly disturbed by proposed sites	Slight visual impact by minimum visual changes, dominate/ degrade with adjacent visual resources	Combined with the low sensitivity of the public viewers, residual visual impact is slightly adverse.
VP16	High Junk Peak	SKI-12	900	Located at very far to hikers VP16; no dominate to any visual element	Slight loss of visual openness by proposed SKI-12	View is slightly disturbed by proposed sites	Slight visual impact by minimum visual changes, dominate/ degrade with adjacent visual resources	Combined with the low sensitivity of the public viewers, residual visual impact is slightly adverse.
VP17	Clear Water Bay Country Park Trail	SKI-1, SKI-2 & SKI-11	3000-4800	building mass & scale are slightly incompatible with surrounding rural setting	Open sky and key ridgeline are mainly preserved and no blockage to the visual openness.	View is slightly disturbed by proposed SKI-2	Slight visual impact by minimum visual changes, dominate/ degrade with adjacent visual resources from SKI-2	Combined with the low sensitivity of the public viewers, residual visual impact is slightly adverse.

VP ID	Description	Source of Impact from Site No.	Viewing Distance (m)	Visual Composition	Visual Obstruction	Effect On Public Viewers	Effect On Visual Resources	Residual Visual Impact
VP18	Ap Tsai Shan (facing south)	SKI-2	500	Located at very closed to VP13; proposed building mass dominated viewing corridor and natural setting create visual incompatible with surroundings	Loss of openness and ridgeline/ open sky view is largely interfered	View is substantially disturbed by proposed site	Substantial visual change by largely loss of greenery and openness	Combined with the medium sensitivity of the public viewers, residual visual impact is significantly adverse.
VP19	Ap Tsai Shan (facing northwest)	SKI-1 & SKI-11	500-1100	building mass & scale are compatible with surrounding visual setting	Open sky and key ridgeline are mainly preserved and no blockage to the visual setting.	View is slightly disturbed by proposed site	Slight visual impact by minimum visual changes, dominate/ degrade with adjacent visual resources	Combined with the medium sensitivity of the public viewers, residual visual impact is slightly adverse.
VP20	Wilson Trail Stage 3 (near Rise Park Villas)	SKI-1, SKI-11 & SKI-12	720-5200	Located at very far to hikers VP20; no dominate to any visual element	No blockage of view	View is slightly disturbed by proposed sites	Slight visual impact by minimum visual changes, dominate/ degrade with adjacent visual resources	Combined with the low sensitivity of the public viewers, residual visual impact is slightly adverse.
VP21	Siu Sai Wan Promenade and Sports Ground	SKI-12	5500	Located at very far to hikers VP21; no dominate to any visual element	No blockage of view	View is slightly disturbed by proposed site	Slight visual impact by minimum visual changes, dominate/ degrade with adjacent visual resources	Combined with the medium sensitivity of the public viewers, residual visual impact is slightly adverse.
VP22	Hang Fa Chuen Playground and Promenade	SKI-12	5500	Located at very far to hikers VP22; no dominate to any visual element	No blockage of view	View is slightly disturbed by proposed site	Slight visual impact by minimum visual changes, dominate/ degrade with adjacent visual resources	Combined with the medium sensitivity of the public viewers, residual visual impact is slightly adverse.

7.1.21 Most of the sites are situated on steep slope and encountering difficult forms of site constraints. With the development parameters of domestic plot ratio of 6 and non-domestic plot ratio of 0.5 to be achieved, the potential scheme of building layout and building heights, which have taken into account all aspects of information available in hand, the existing site context and site formation levels, are considered optimal. To minimise the visual impacts, building separations have been introduced as far as practicable to maximise the air ventilation and to minimise the visual wall effect. Due to the irregular configuration of sites and tight development parameters to be achieved, high rise housing blocks in clusters are inevitably necessary to optimise their development intensity. Therefore, it is anticipated that the building mass and form would inevitably impose some adverse visual impacts to the existing environment including some ridgelines, open sky view given these are high density development proposed in urban fringe area.

7.1.22 The five potential housing sites would have significantly to slightly adverse visual impact inevitably. Some of the impacts are blockage of views, loss of openness and degree of visual obstruction. The overall residual impacts on VP12, VP13 and VP18 would be significantly adverse; while VP6, VP7, and VP9 would be moderately adverse; VP3, VP5, VP11, VP14, VP15, VP16, VP17, VP19, VP20, VP21, VP22 would be slightly adverse after all mitigations are implemented.

7.1.23 Landscaping, screening and greening measures are proposed to compensate the loss of greenery, numbers of public open within each individual sites, recreational space and streetscapes will be created as an integral part of housing developments. This will provide opportunity for the compensation to the loss of any planting disturbed by the works. Nevertheless, proposed landscape and greening mitigation measures are not noticeable from most VPs. The proposed building facade, colour and treatments of the future housing developments should be comparable to adjacent visual resources. The proposed housing development sites need to be further investigated and designed to improve urban legibility and allow visual permeability, to be congruent with the overall TKO urban development.

7.1.24 There is no detrimental impact to adjacent visual resources; however overall visual impact on VP12, VP13 and VP18 are significantly adverse due to extensive site formation, tree felling will affect the visual resources; disturbance to the natural landscape on adjacent visual characters by loss of greenery from even all mitigation measures are implemented. The proposed building height generally match with the urban context of Tseung Kwan O. The overall visual impact of the 5 potential housing sites would be moderately adverse.

Figures



LEGEND :

PROPOSED HOUSING DEVELOPMENT

Rev	Description	By	Date

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air ventilation and visual impact assessments for potential Housing sites in the vicinity of
Tseung Kwan O - FS

Drawing title

Aerial photography

Drawing no.			Rev.
FIGURE 1.0			-
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SYU	10/15	KC	SYC
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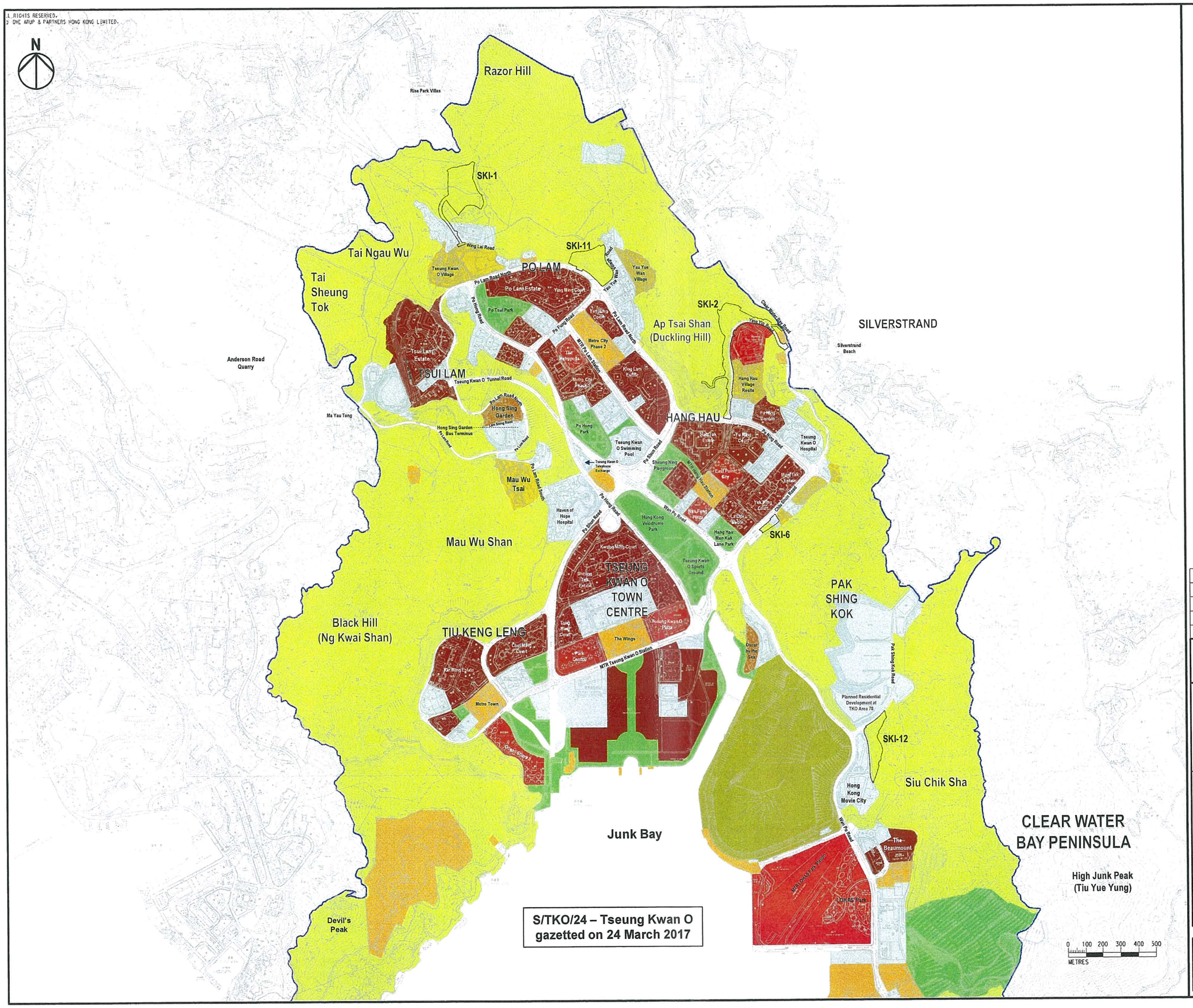

Legend

- Outline Zoning
- Study Area

OZP Zoning

- CDA Comprehensive Development Area
- O Open Space
- R(E) Residential (Group E)
- REC Recreation
- V Village Type Development
- GB Green Belt
- R(A) Residential (Group A)
- C/R Commercial/Residential
- R(C) Residential (Group C)
- G/IC Government, Institution or Community
- OU Other Specified Uses
- R(B) Residential (Group B)

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Drawing title

Planning and development control framework

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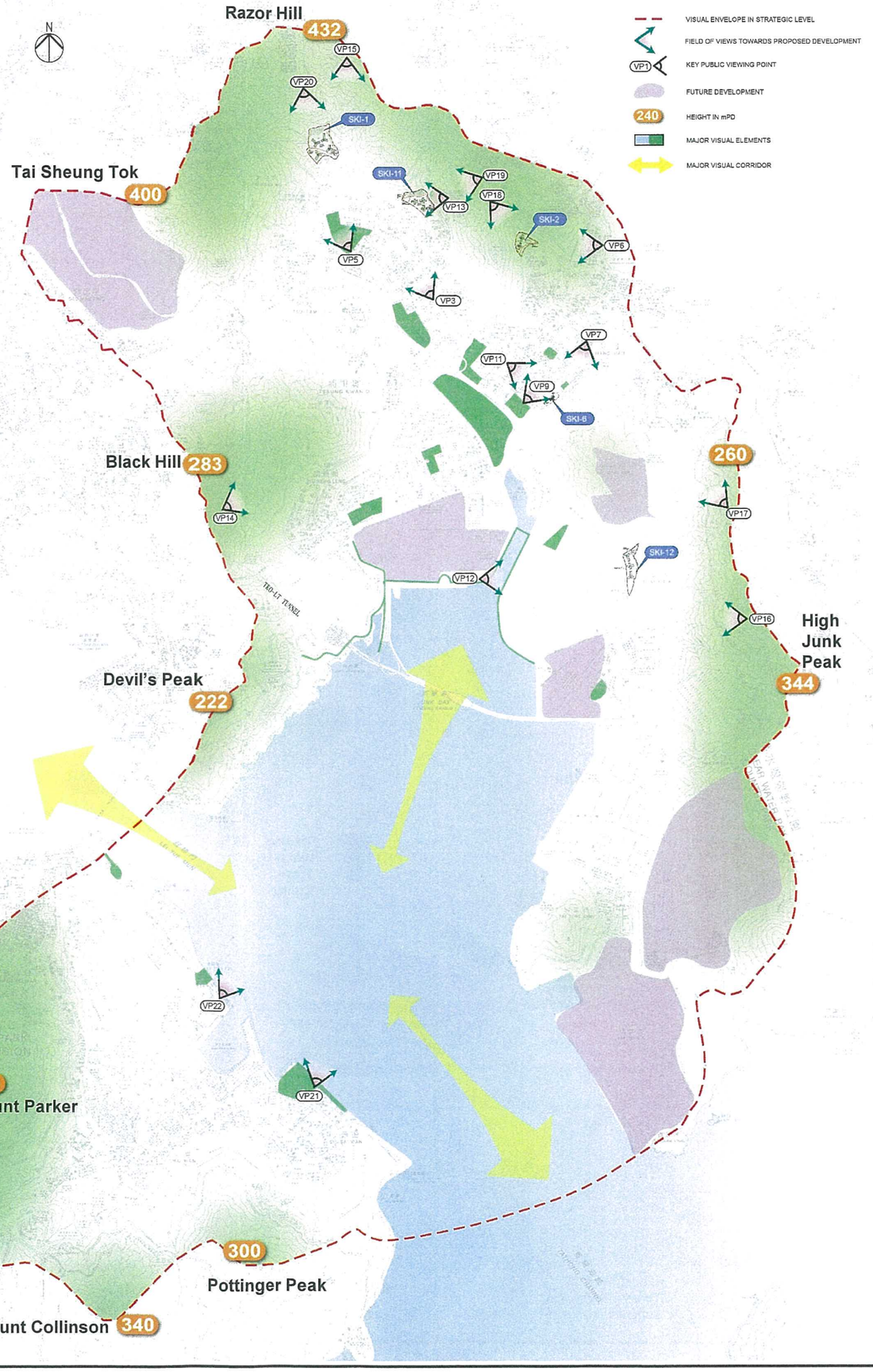
Key Public View Points		Relevant Potential Housing Sites
VP3	Decked Footpath connecting Po Lam MTR station to Tseung Kwan O Swimming Pool	SKI-1
VP5	Pavilion inside Po Tsui Park	SKI-1
VP6	Silverstrand Beach Public Car Park	SKI-2
VP7	Tseung Kwan O Hospital	SKI-6
VP9	Hang Hau Man Kuk Lane Park (facing northeast)	SKI-6
VP11	Hau Tak Shopping Centre	SKI-6
VP12	Tseung Kwan O Waterfront Promenade	SKI-12
VP13	Yau Yue Wan Village Playground	SKI-11
VP14	Wilson Trail Stage 3 (Black Hill)	SKI-12
VP15	Razor Hill	SKI-6, SKI-11 & SKI-12
VP16	High Junk Peak	SKI-12
VP17	Clear Water Bay Country Park Trail	SKI-1, SKI-2 & SKI-11,
VP18	Ap Tsai Shan (facing south)	SKI-2
VP19	Ap Tsai Shan (facing northwest)	SKI-1 & SKI-11
VP20	Wilson Trail Stage 3 (near Rise Park Villas)	SKI-1, SKI-11 & SKI-12
VP21	Siu Sai Wan Promenade and Sport Ground	SKI-12
VP22	Heng Fa Chuen Playground and Promenade	SKI-12



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Baseline of key visual elements for VIA
(overall plan)

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FIGURE 2.0			
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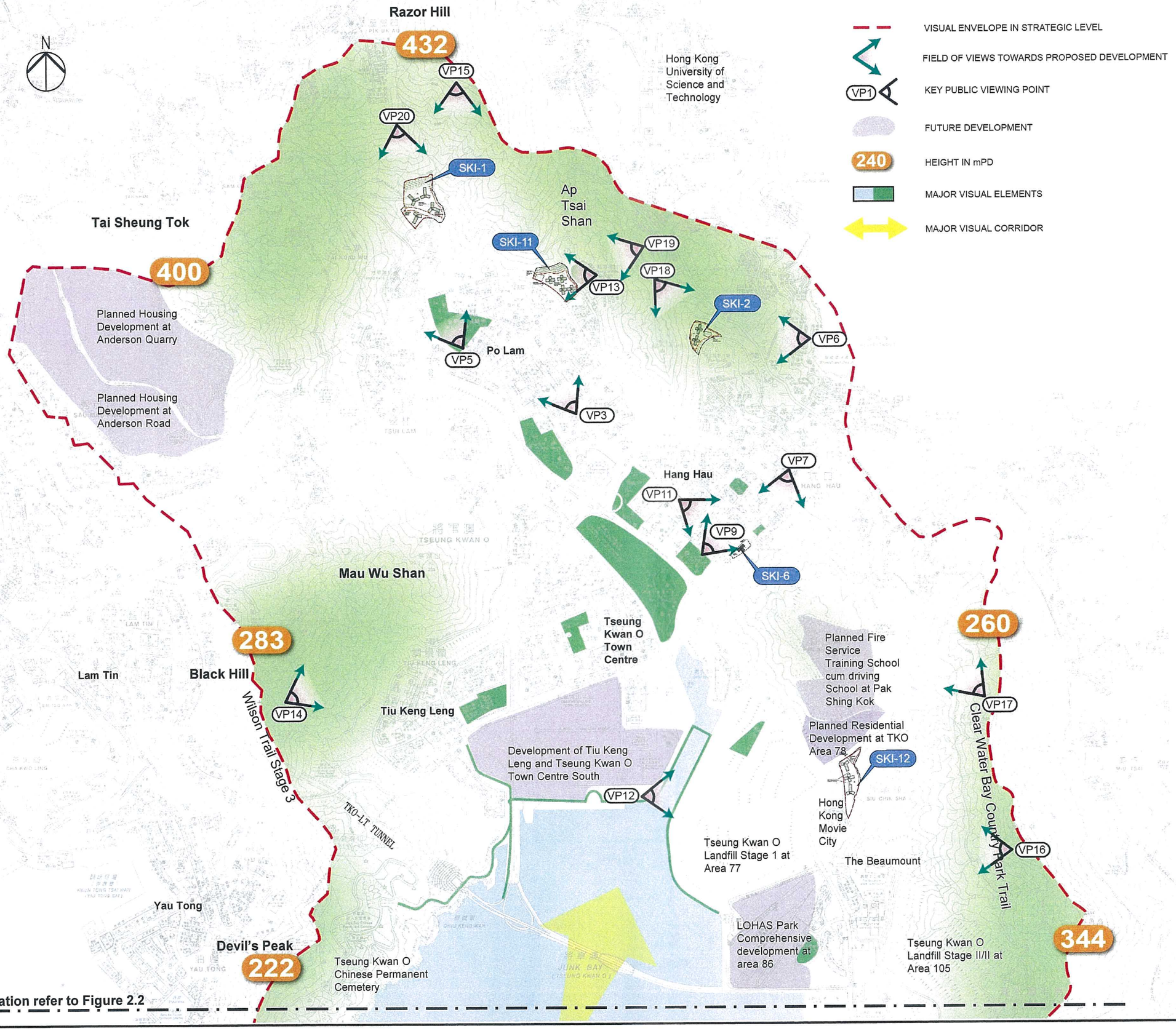

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Drawing title

Baseline of key visual elements for VIA
Sheet 1 of 2

Drawing no.	FIGURE 2.1		Rev.
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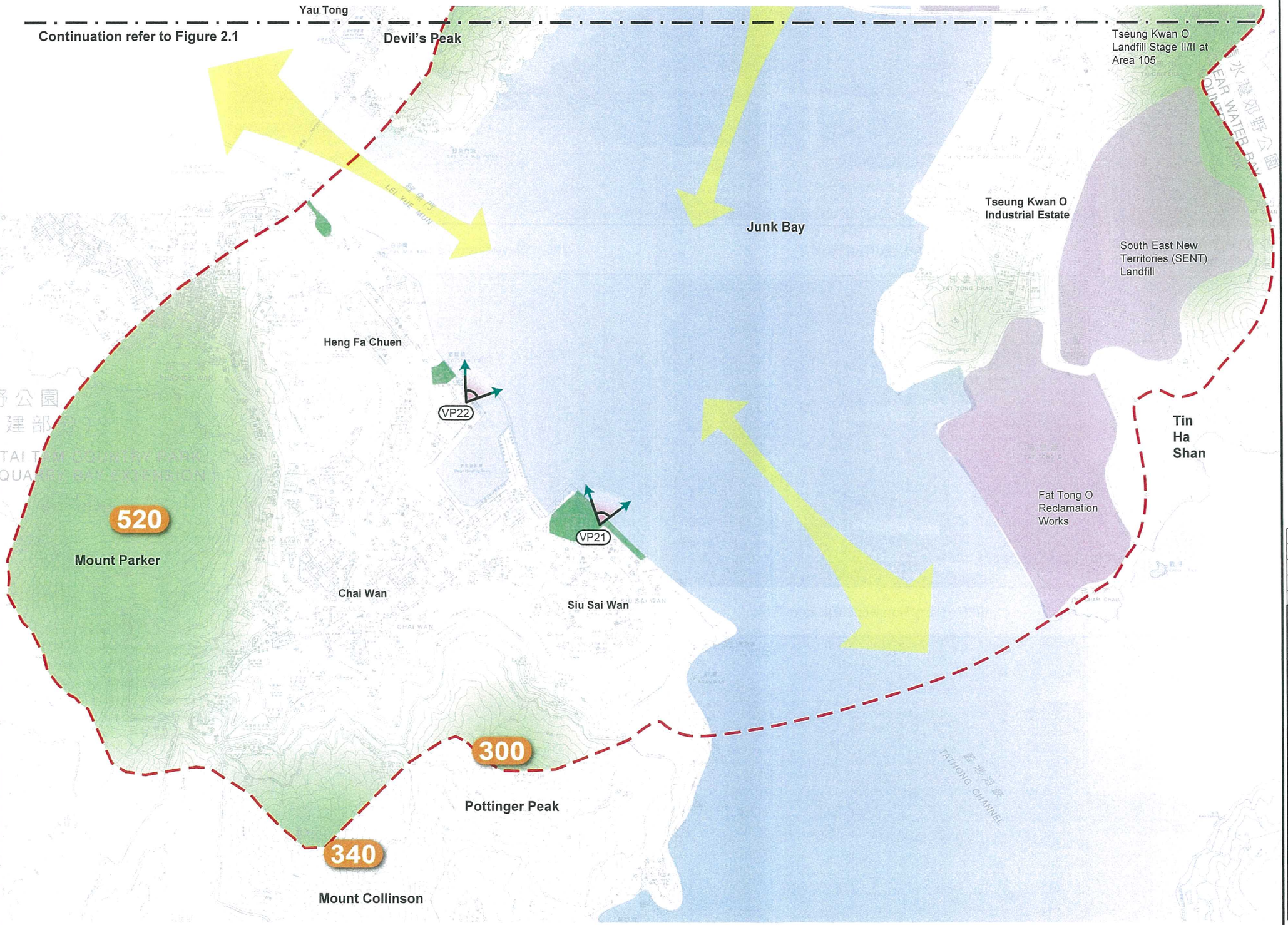

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air ventilation and visual impact assessments for potential Housing sites in the vicinity of
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Baseline of key visual elements for VIA
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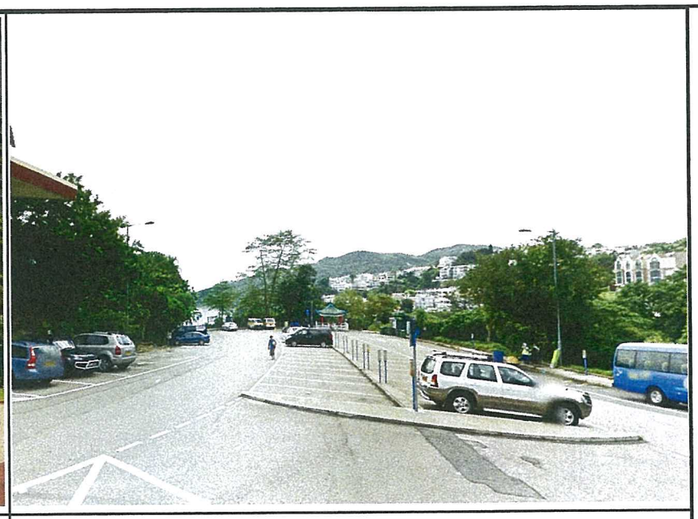
VP3 - Decked Footpath connecting Po Lam MTR station to Tseung Kwan O Swimming Pool



VP5- Po Tsui Park



VP6 - Silverstrand Beach Public Car Park



VP7 - Tseung Kwan O Hospital



VP9 - Hang Hau Man Kuk Lane Park



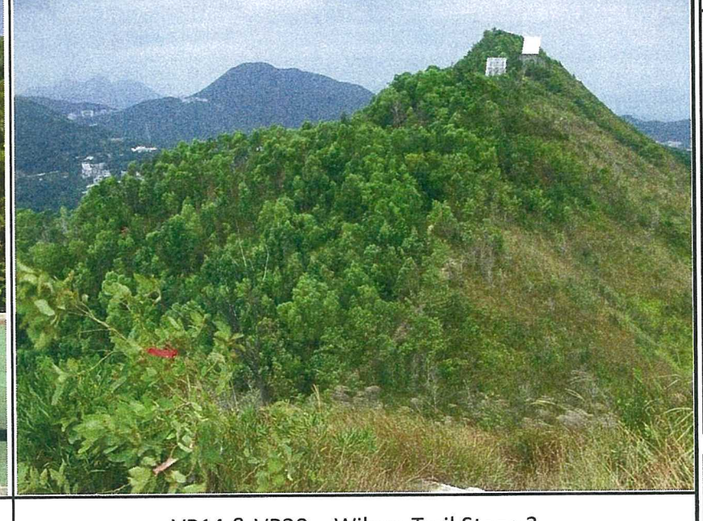
VP11 - Hau Tak Shopping Centre



VP12 - Tseung Kwan O Waterfront Promenade



VP13 - Yau Yue Wan Village Playground



VP14 & VP20 - Wilson Trail Stage 3

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Drawing title

Photos of key public view points
Sheet 1 of 2

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FIGURE 2.3			A
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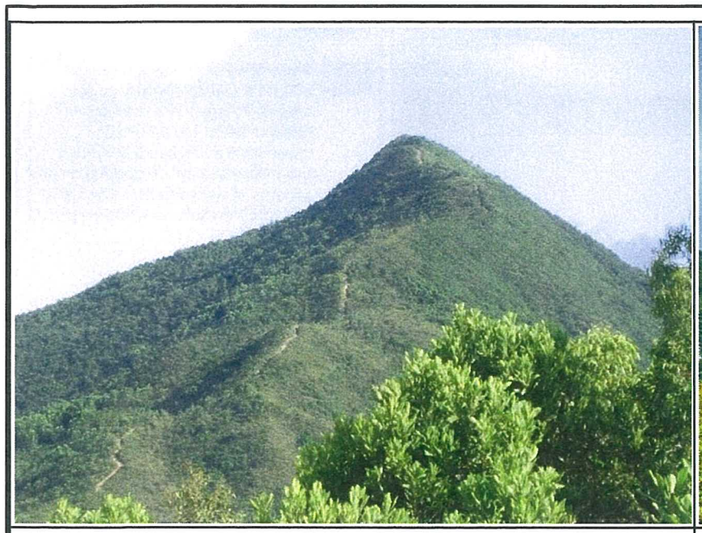
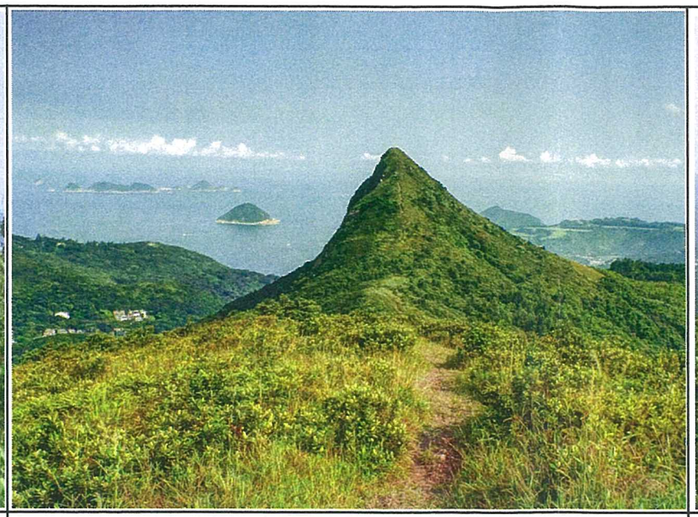


VP15 - Razor Hill



VP16 & VP17 - High Junk Peak



VP17 - Clear Water Bay Country Park Trail



VP18 & VP19 - Ap Tsai Shan



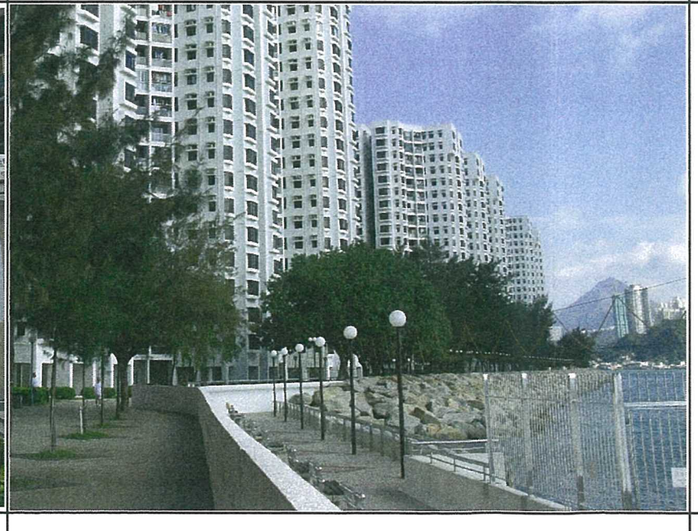
VP20 – From Wilson Trail Stage 3



VP20 – View to Wilson Trail Stage 3



VP21 - Siu Sai Wan Promenade and Sports Ground



VP22 - Hang Fa Chuen Playground and Promenade

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Photos of key public view points
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FIGURE 2.4		A
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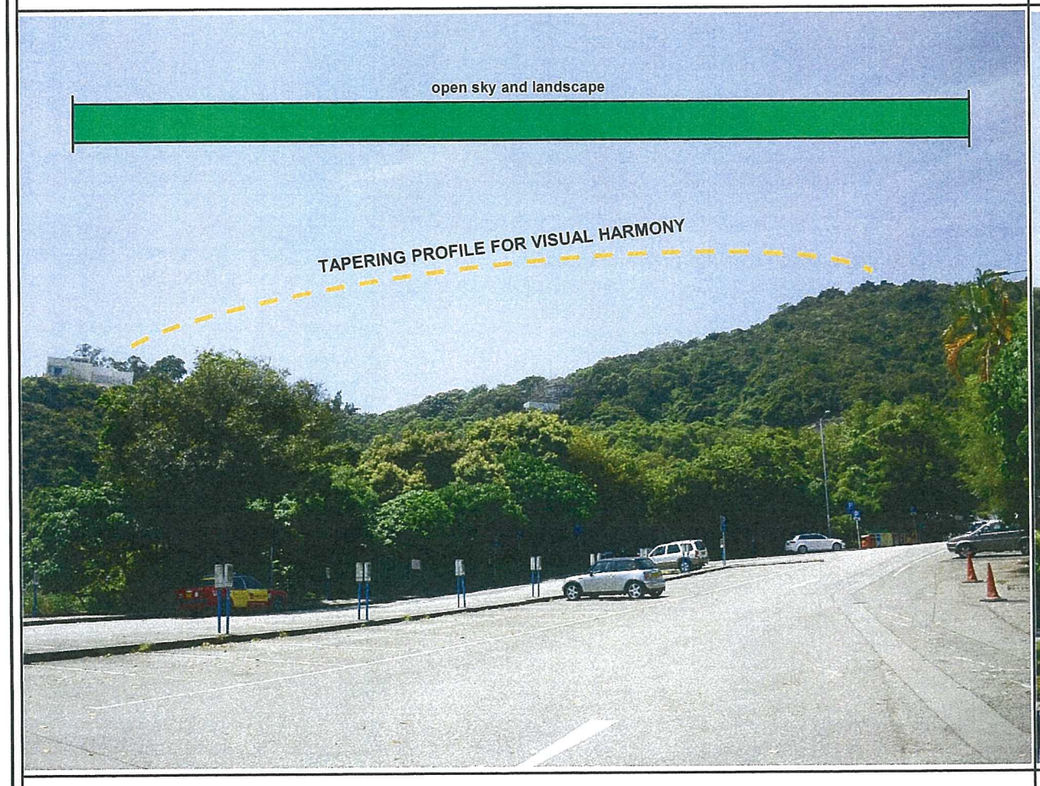
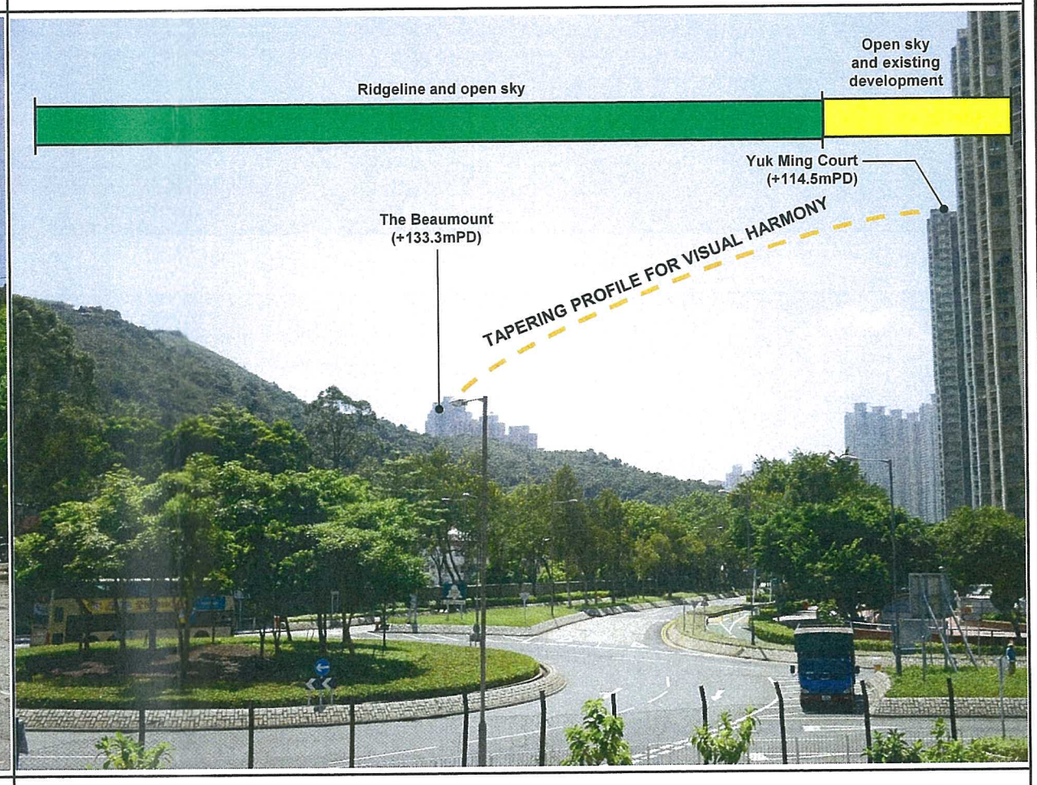
VP3 - Decked Footpath connecting Po Lam MTR station to Tseung Kwan O Swimming Pool



VP5 - Pavilion inside Po Tsui Park



VP6 - Silverstrand Beach Public Car Park



VP7 - Tseung Kwan O Hospital

Legend

- Views towards positive visual elements / visual resources and desirable vistas. These views were not dominated by the existing townscape which could provide essential visual relief, orientation and a sense of nature to the public and should be preserved with high priority
- Views towards positive visual resources / elements with a mixed of existing developments. Although these views are partially disturbed by existing developments, a significant part of the view remains unobstructed
- Views which are largely disturbed or blocked by existing developments

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Visual analysis of key viewpoints (VPs)
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FIGURE 3.3			
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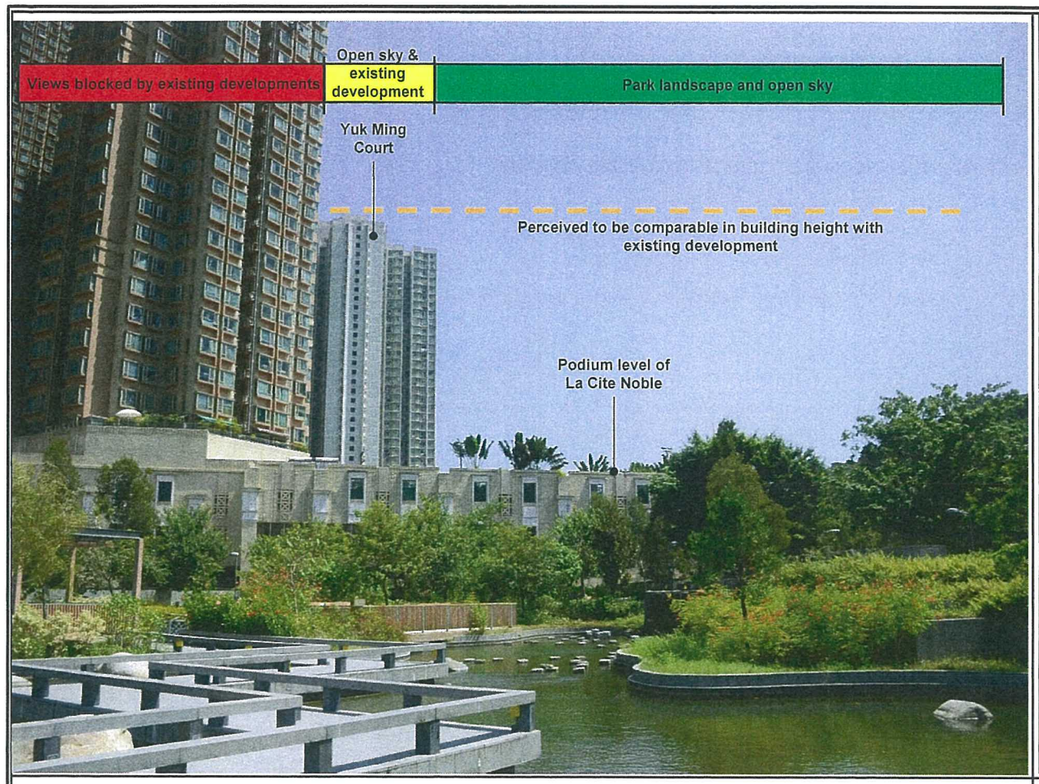
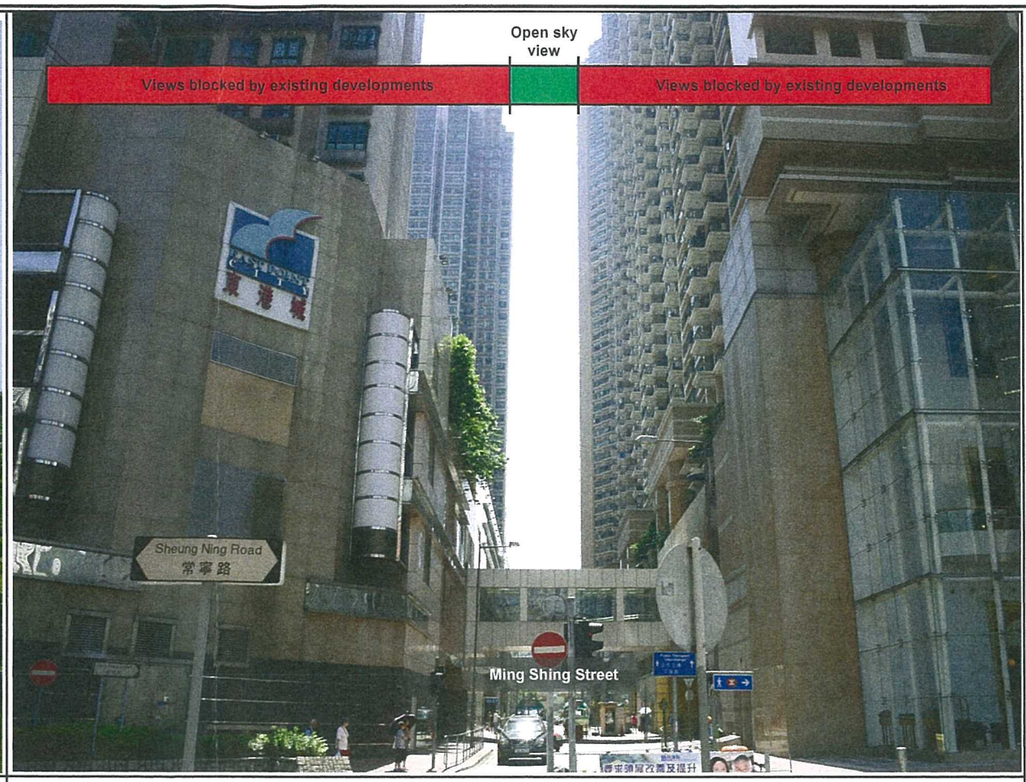
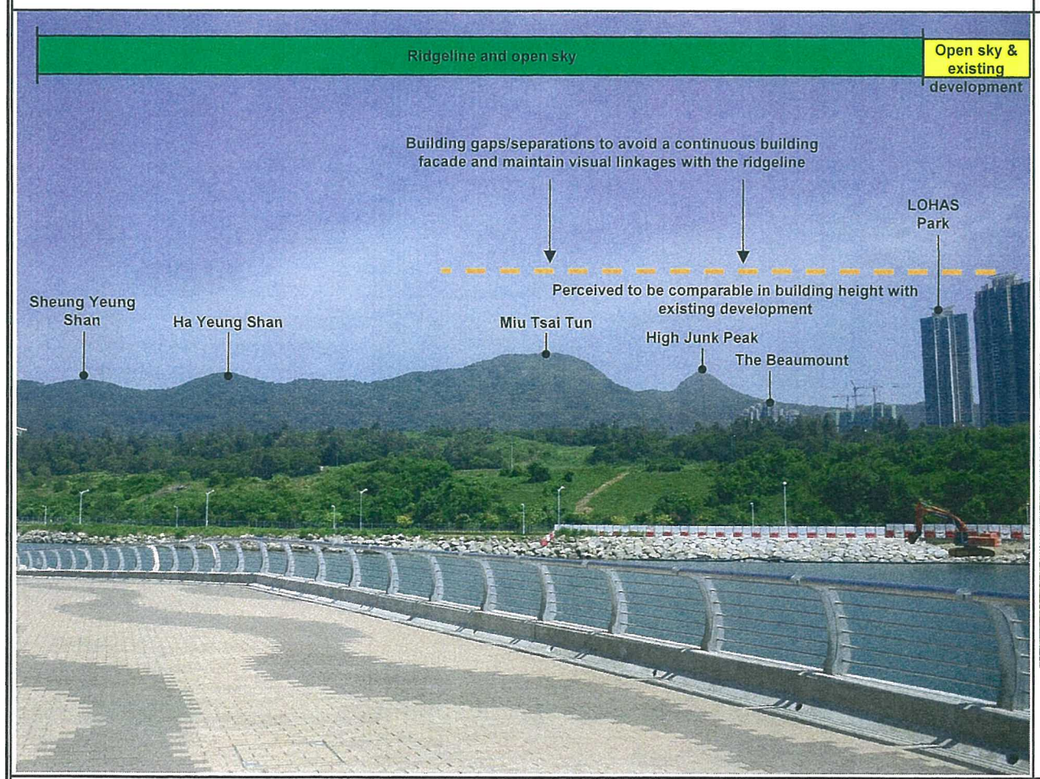


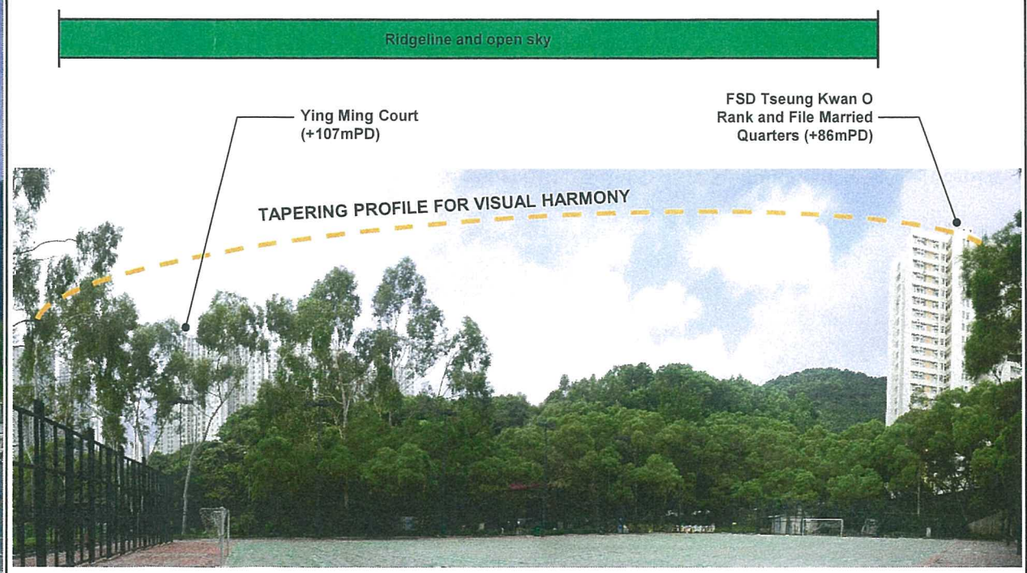
VP9 - Hang Hau Man Kuk Lane Park (facing northeast)



VP11 - Hau Tak Shopping Centre



VP12 - Tseung Kwan O Waterfront Promenade



VP13 - Yau Yue Wan Village Playground

Legend

- Views towards positive visual elements / visual resources and desirable vistas. These views were not dominated by the existing townscape which could provide essential visual relief, orientation and a sense of nature to the public and should be preserved with high priority
- Views towards positive visual resources / elements with a mixed of existing developments. Although these views are partially disturbed by existing developments, a significant part of the view remains unobstructed
- Views which are largely disturbed or blocked by existing developments

Rev	Description	By	Date

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Drawing title: Visual analysis of key viewpoints (VPs) Sheet 2 of 5

Drawing no.	Rev.
FIGURE 3.4	

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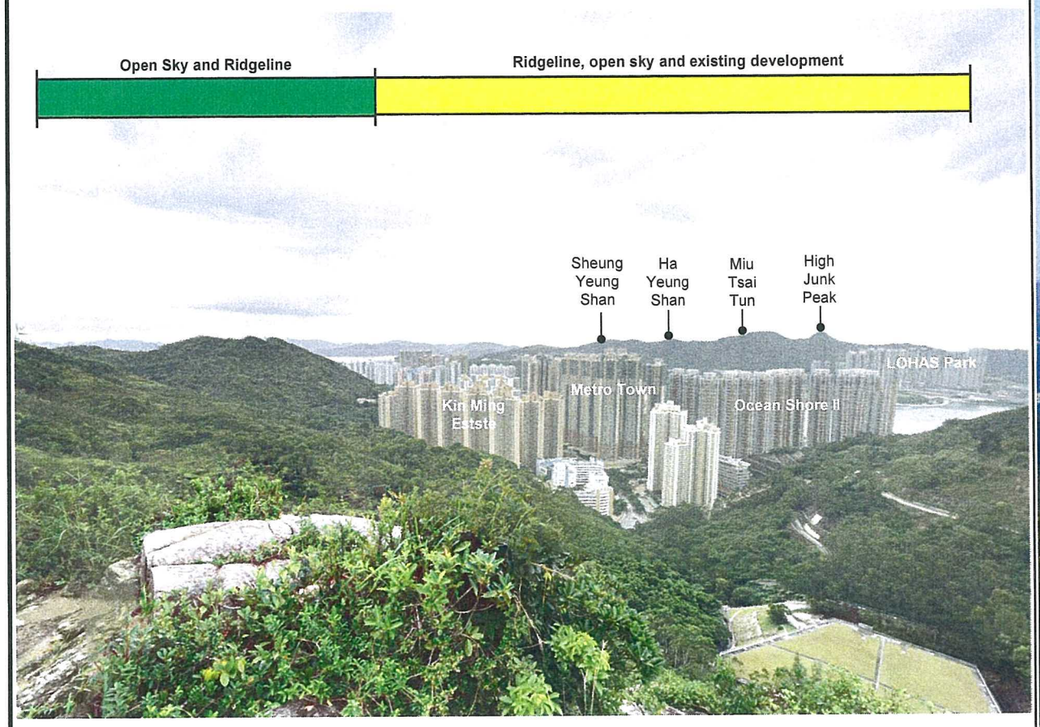
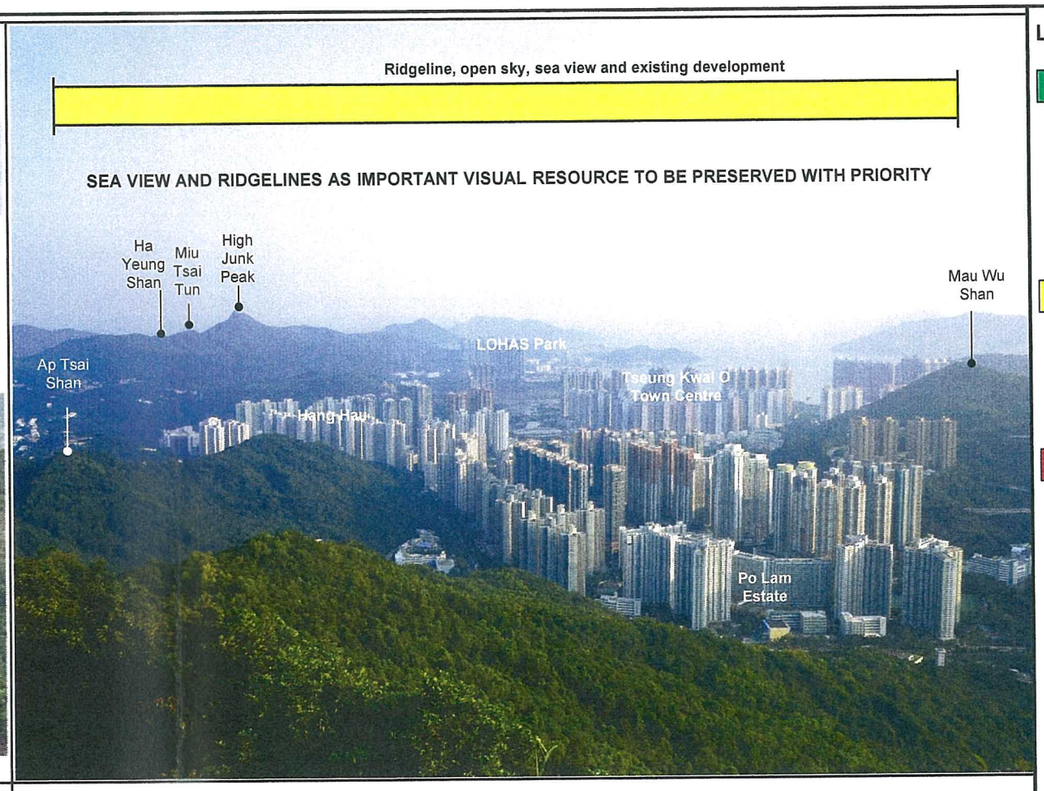
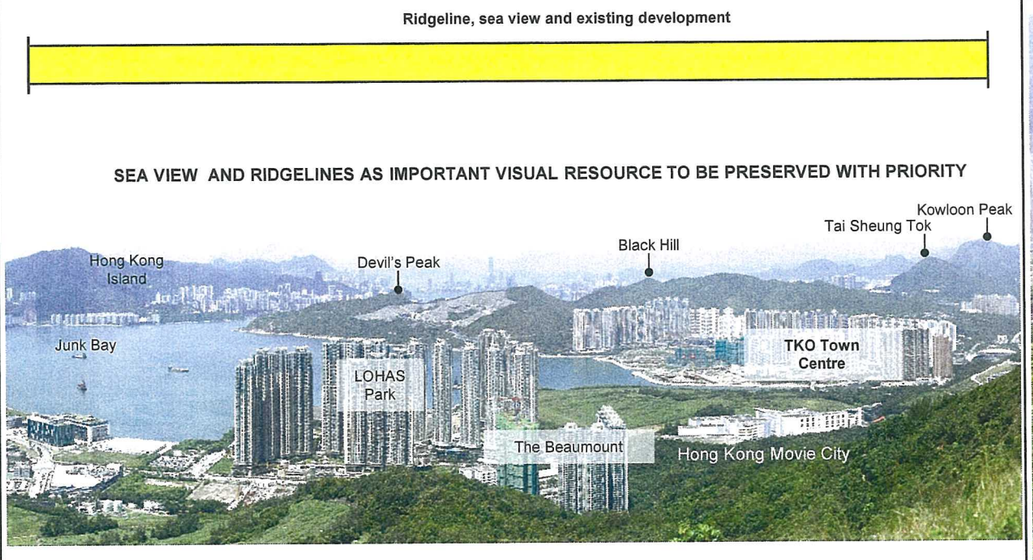


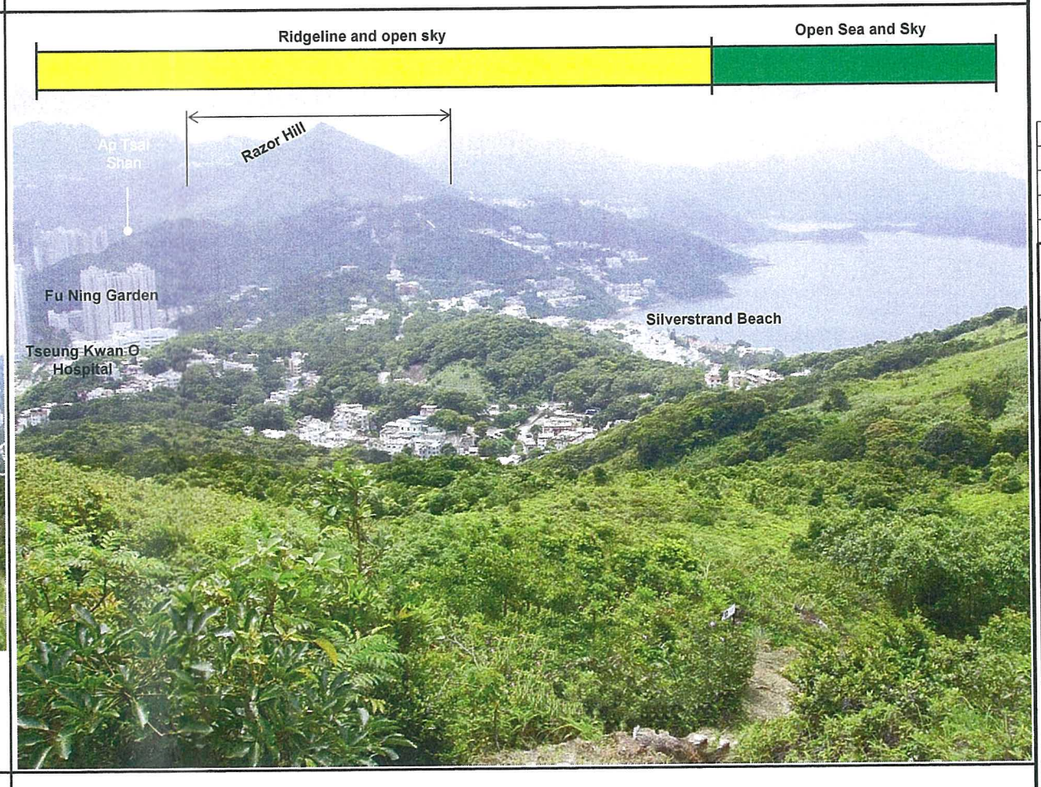
VP14 - Wilson Trail Stage 3 (Black Hill facing East)



VP15 - Razor Hill



VP16 – High Junk Peak



VP17 - Clear Water Bay Country Park Trail

Legend

- Views towards positive visual elements / visual resources and desirable vistas. These views were not dominated by the existing townscape which could provide essential visual relief, orientation and a sense of nature to the public and should be preserved with high priority
- Views towards positive visual resources / elements with a mixed of existing developments. Although these views are partially disturbed by existing developments, a significant part of the view remains unobstructed
- Views which are largely disturbed or blocked by existing developments

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air ventilation and visual impact assessments for potential Housing sites in the vicinity of Tseung Kwan O – FS

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Visual analysis of key viewpoints (VPs)
Sheet 3 of 5

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FIGURE 3.5			
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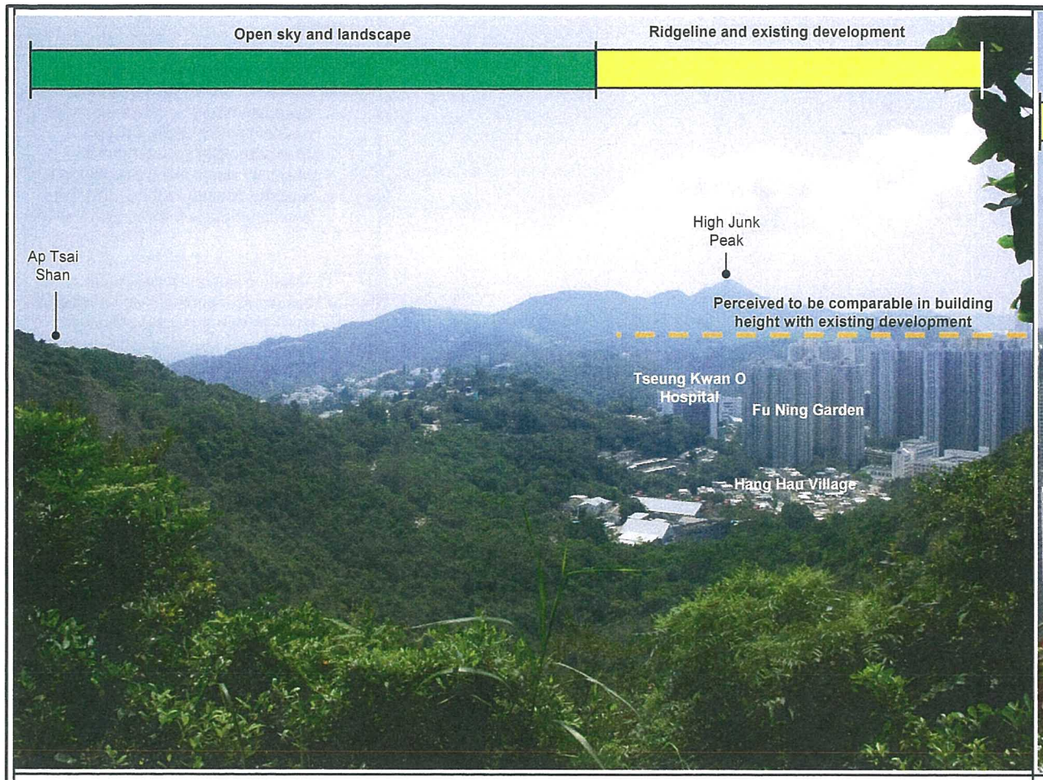
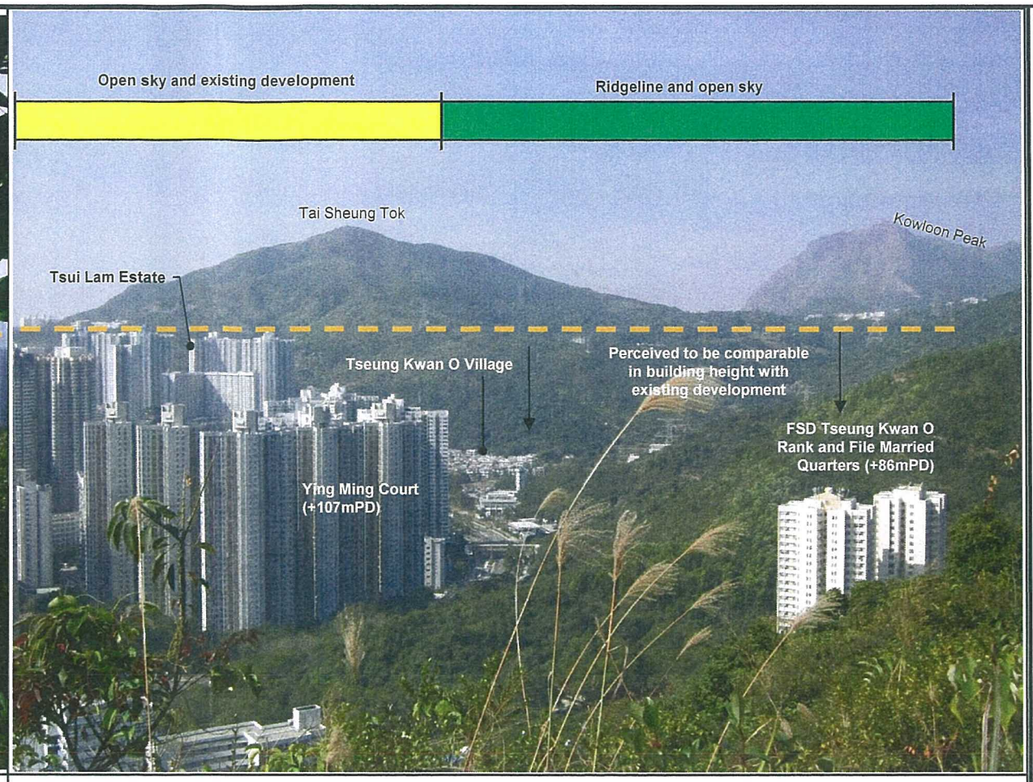
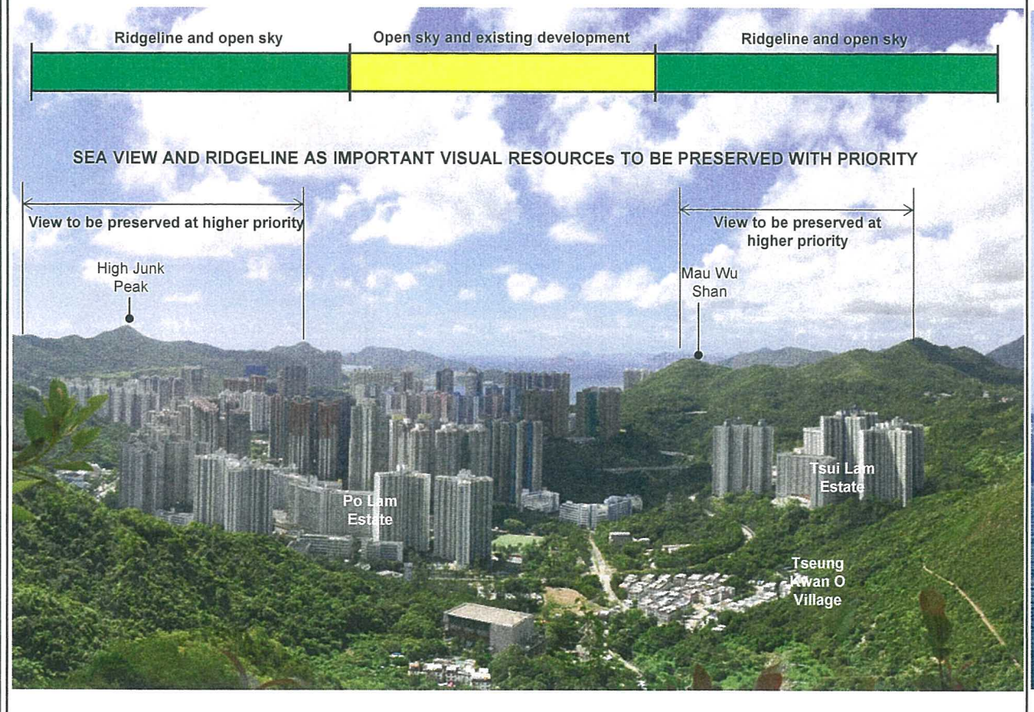


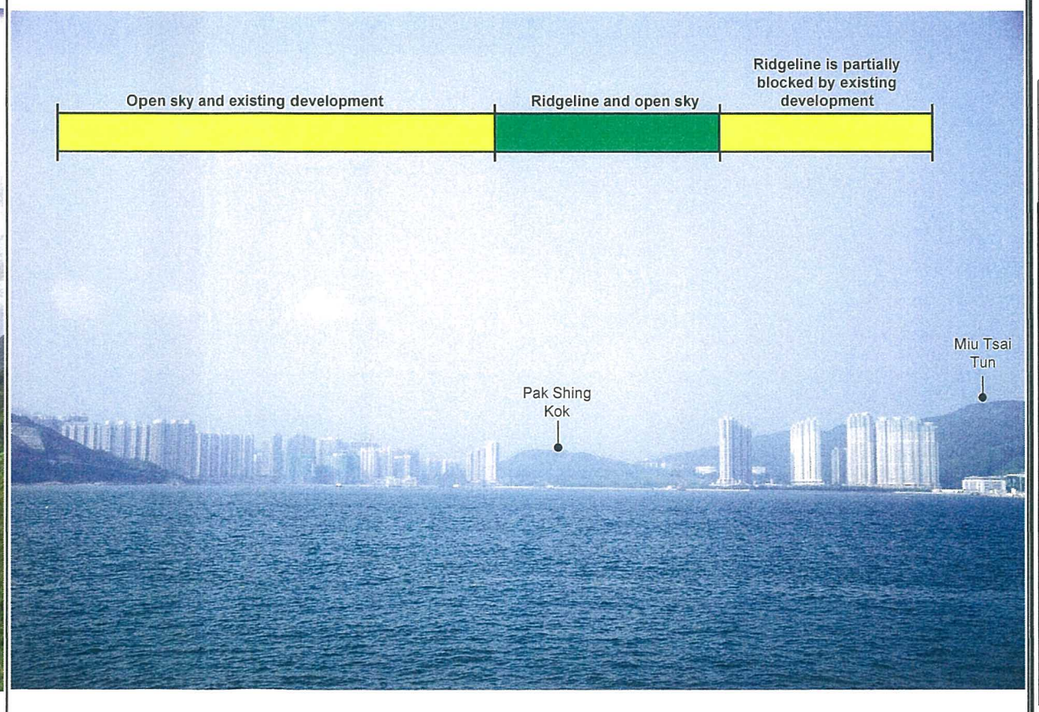
VP18 – Ap Tsai Shan (facing south)



VP19 – Ap Tsai Shan (facing northwest)



VP20 - Wilson Trail Stage 3 (near Rise Park Villas)



VP21 - Siu Sai Wan Promenade and Sports Ground

Legend

- Views towards positive visual elements / visual resources and desirable vistas. These views were not dominated by the existing townscape which could provide essential visual relief, orientation and a sense of nature to the public and should be preserved with high priority
- Views towards positive visual resources / elements with a mixed of existing developments. Although these views are partially disturbed by existing developments, a significant part of the view remains unobstructed
- Views which are largely disturbed or blocked by existing developments

Rev	Description	By	Date

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air ventilation and visual impact assessments for potential Housing sites in the vicinity of
Tseung Kwan O – FS

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Visual analysis of key viewpoints (VPs)
Sheet 4 of 5

Drawing no			Rev.
FIGURE 3.6			
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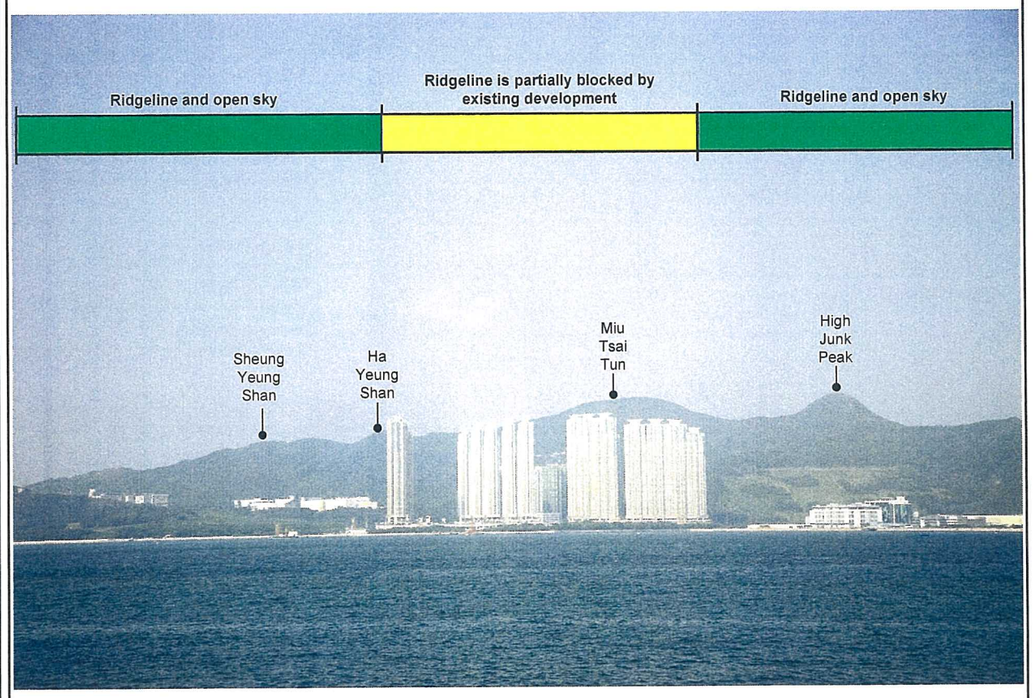

VP22 - Hang Fa Chuen Playground and Promenade

Legend

- Views towards positive visual elements / visual resources and desirable vistas. These views were not dominated by the existing townscape which could provide essential visual relief, orientation and a sense of nature to the public and should be preserved with high priority
- Views towards positive visual resources / elements with a mixed of existing developments. Although these views are partially disturbed by existing developments, a significant part of the view remains unobstructed
- Views which are largely disturbed or blocked by existing developments

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air ventilation and visual impact assessments for potential Housing sites in the vicinity of
Tseung Kwan O – FS

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Visual analysis of key viewpoints (VPs)
Sheet 5 of 5

Drawing no.			Rev.
FIGURE 3.7			
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Construction Phase	
CM1	Minimised works area
CM2	Construction period reduced to practical minimum
CM3	Construction traffic (land and sea) reduced to practical minimum
CM4[1]	Erection of decorative mash screen or construction hoardings
CM5	Avoidance of excessive height and bulk of site buildings and structures
CM6	Control of night-time lighting
Operation Phase	
OM1	All above-ground structures shall be sensitively designed in term of scale, height and bulk (visual recessive)
OM2	Use appropriate building materials and colours in built structures
OM3	Lighting units to be directional and minimise unnecessary light spill and glare
OM4[2]	Implementation of greening measures e.g. roadside planting and provision of green coverage within the proposed development
OM5[3]	Sensitive design of streetscape, vertical greening, landscape treatment on slope and buffer zone should be compatible with surrounding context
OM6	Disturbed Area during construction shall be reinstated

NOTE:
1: Example of decorative hoardings refer to **Appendix A1**
2: The greening ratio for all housing sites will comply with Sustainable Building Design Guidelines (**PNAP APP152**) and Site Coverage of Greenery for Government Building Projects (**DEVB TCW No. 3/2012**).
3: Conceptual Streetscape Design and Landscape Treatment on Slope refer to **Appendix A2** & **A3** accordingly

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Agreement No. NTE/03/2015
air ventilation and visual impact assessments for potential Housing sites in the vicinity of
Tseung Kwan O – FS

Drawing title
Proposed mitigation measures

Drawing no.			Rev.
FIGURE 4.0			
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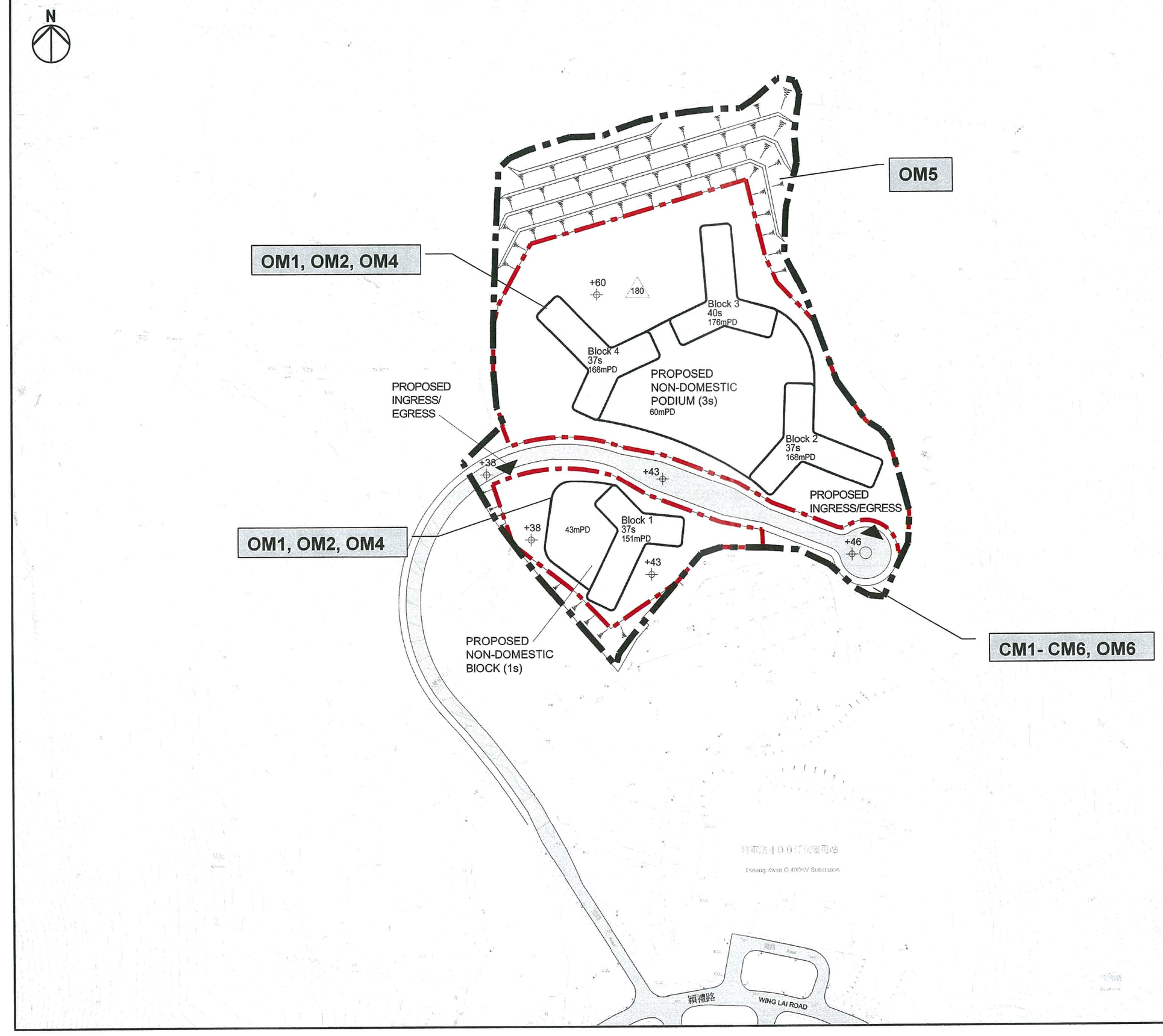

Study Area

Proposed Public Housing Site Area (Subject to detail design)

NOTE: Proposed Mitigation Measures is listed on **Figure 4.0**. The layout plan and slope profile will be subjected to detailed design stage. Greening measures of visual illustration also provided in Appendix A.

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Tseung Kwan O – FS

Drawing title

SKI-1 – north of Tseung Kwan O Village conceptual layout plan (subject to detail design)

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FIGURE 4.1			A
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N

OM1, OM2, OM4

PROPOSED NON-DOMESTIC BLOCK (6s)

Block 1
40s
160mPD

170

+44

74mPD

+44

44mPD

Block 2
40s
160mPD

CM1- CM6, OM6

PROPOSED INGRESS/EGRESS

YING YIP ROAD

PROPOSED NON- DOMESTIC PODIUM (1s)

OM5

DRAGON LAKE VILLA

CLEAR WATER BAY ROAD

清水灣電影製片廠

CLEAR WATER BAY FILM STUDIO

Study Area

Proposed Public Housing Site Area (Subject to detail design)

NOTE: Proposed Mitigation Measures is listed on **Figure 4.0**. The layout plan and slope profile will be subjected to detailed design stage. Greening measures of visual illustration also provided in Appendix A.

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Drawing title

SKI-2 – northwest of Ying Yip Road conceptual layout plan
(subject to detail design)

Drawing no.			Rev.
FIGURE 4.2			A
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SYU	10/15	KC	SYC
Scale	-	Status	

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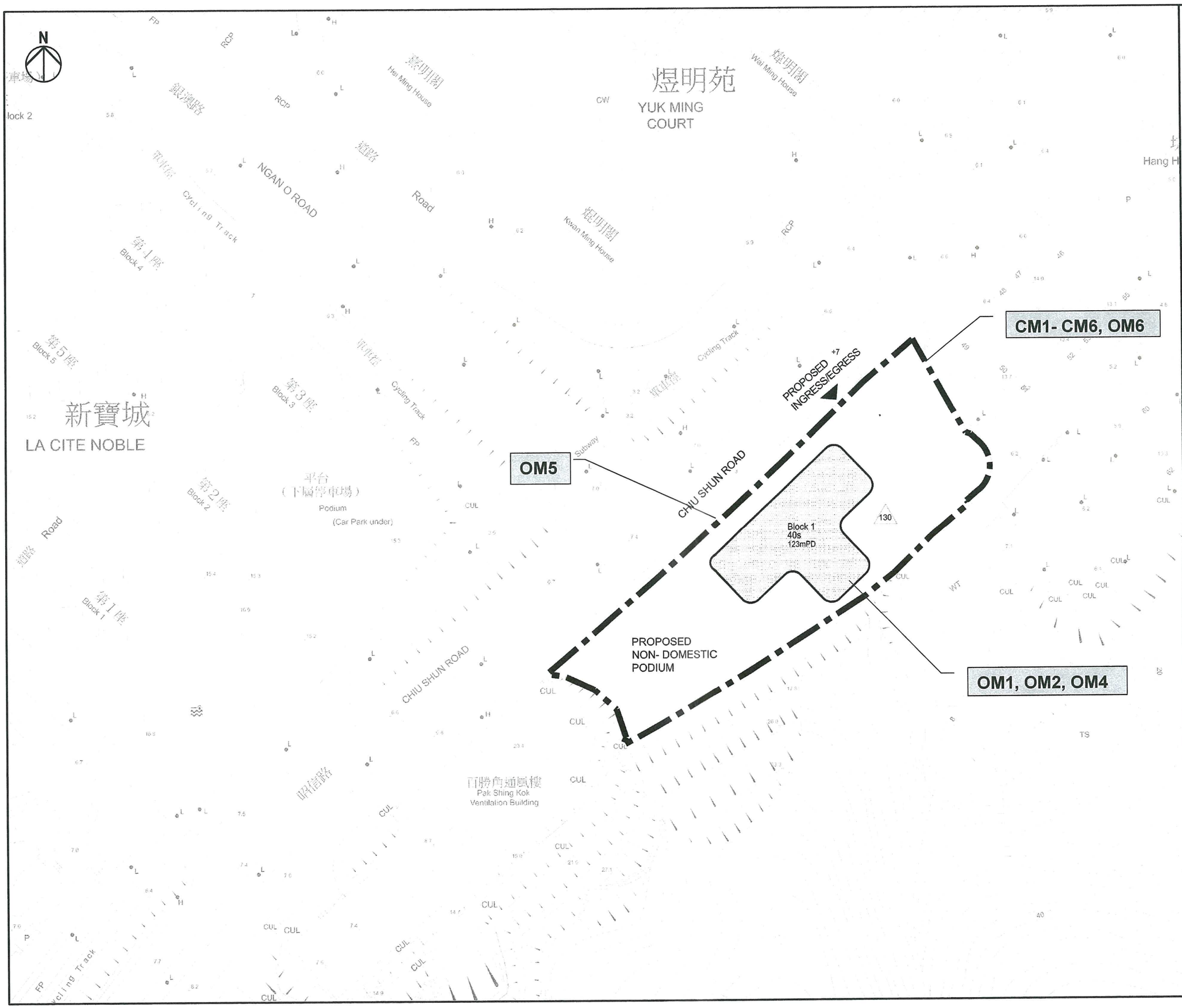

Study Area

NOTE: Proposed Mitigation Measures is listed on **Figure 4.0**. The layout plan and slope profile will be subjected to detailed design stage. Greening measures of visual illustration also provided in Appendix A.

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Tseung Kwan O – FS

Drawing title

SKI-6 – south of Chiu Shun Road conceptual layout plan
(subject to detail design)

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FIGURE 4.3			A
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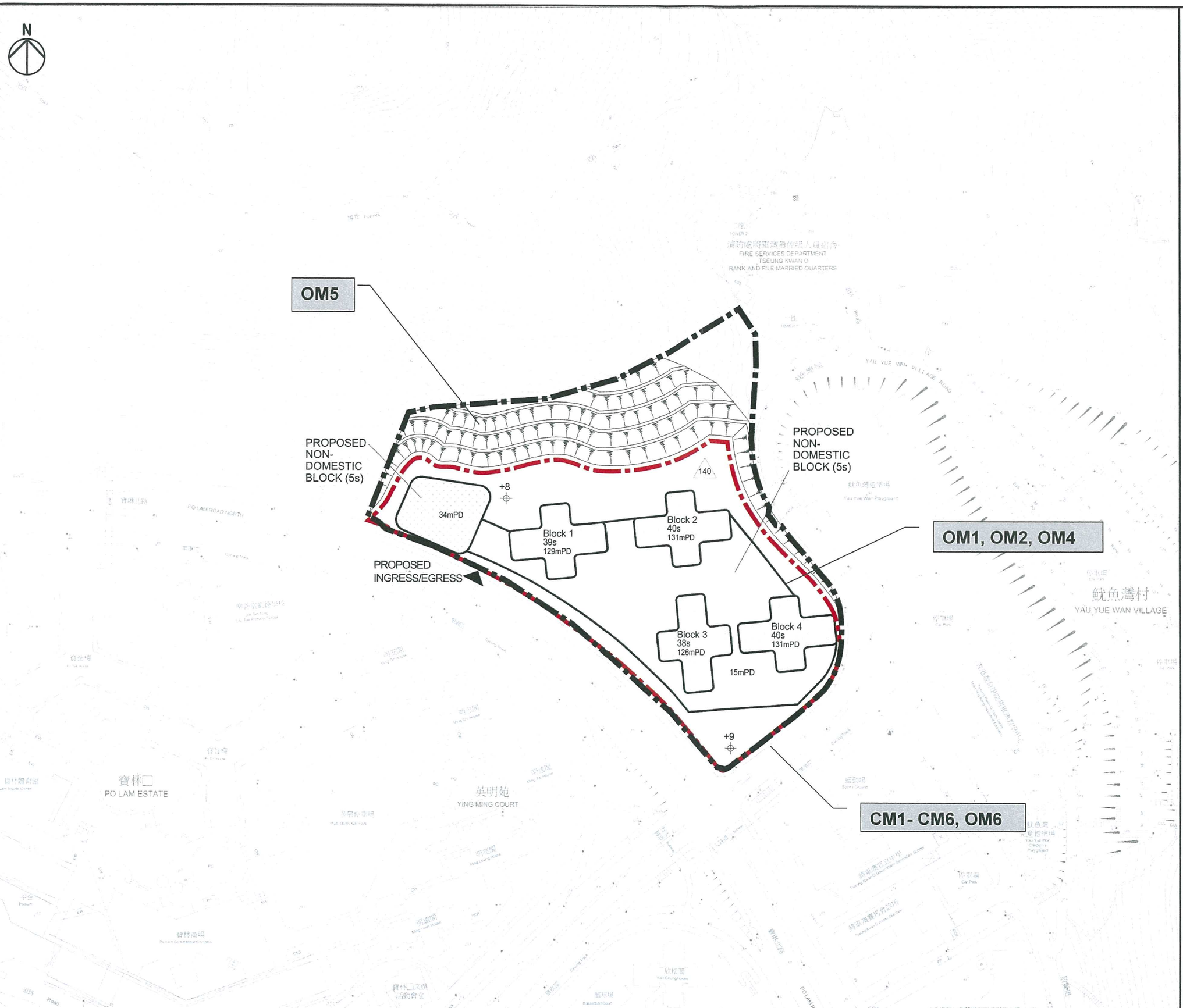

Study Area

Proposed Public Housing Site Area (Subject to detail design)

NOTE: Proposed Mitigation Measures is listed on **Figure 4.0**. The layout plan and slope profile will be subjected to detailed design stage. Greening measures of visual illustration also provided in Appendix A.

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Drawing title

SKI-11 - west of Yau Yue Wan Village
conceptual layout plan
(subject to detail design)

Drawing no.		Rev.
FIGURE 4.4		A
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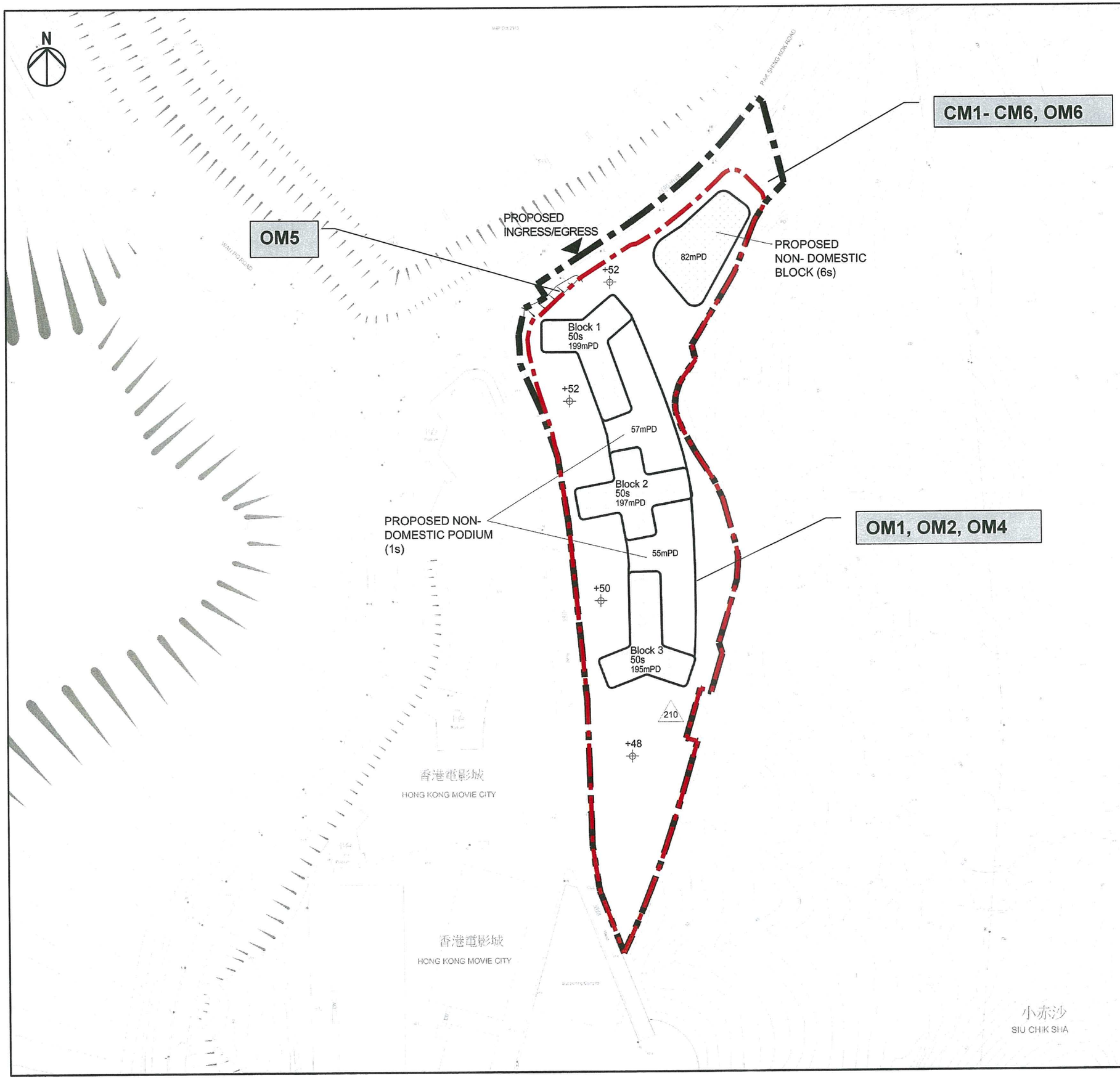

Study Area

Proposed Public Housing Site Area (Subject to detail design)

NOTE: Proposed Mitigation Measures is listed on **Figure 4.0**. The layout plan and slope profile will be subjected to detailed design stage. Greening measures of visual illustration also provided in Appendix A.

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Drawing title

SKI-12 - east of Movie City conceptual layout plan
(subject to detail design)

Drawing no.		Rev.
FIGURE 4.5		A
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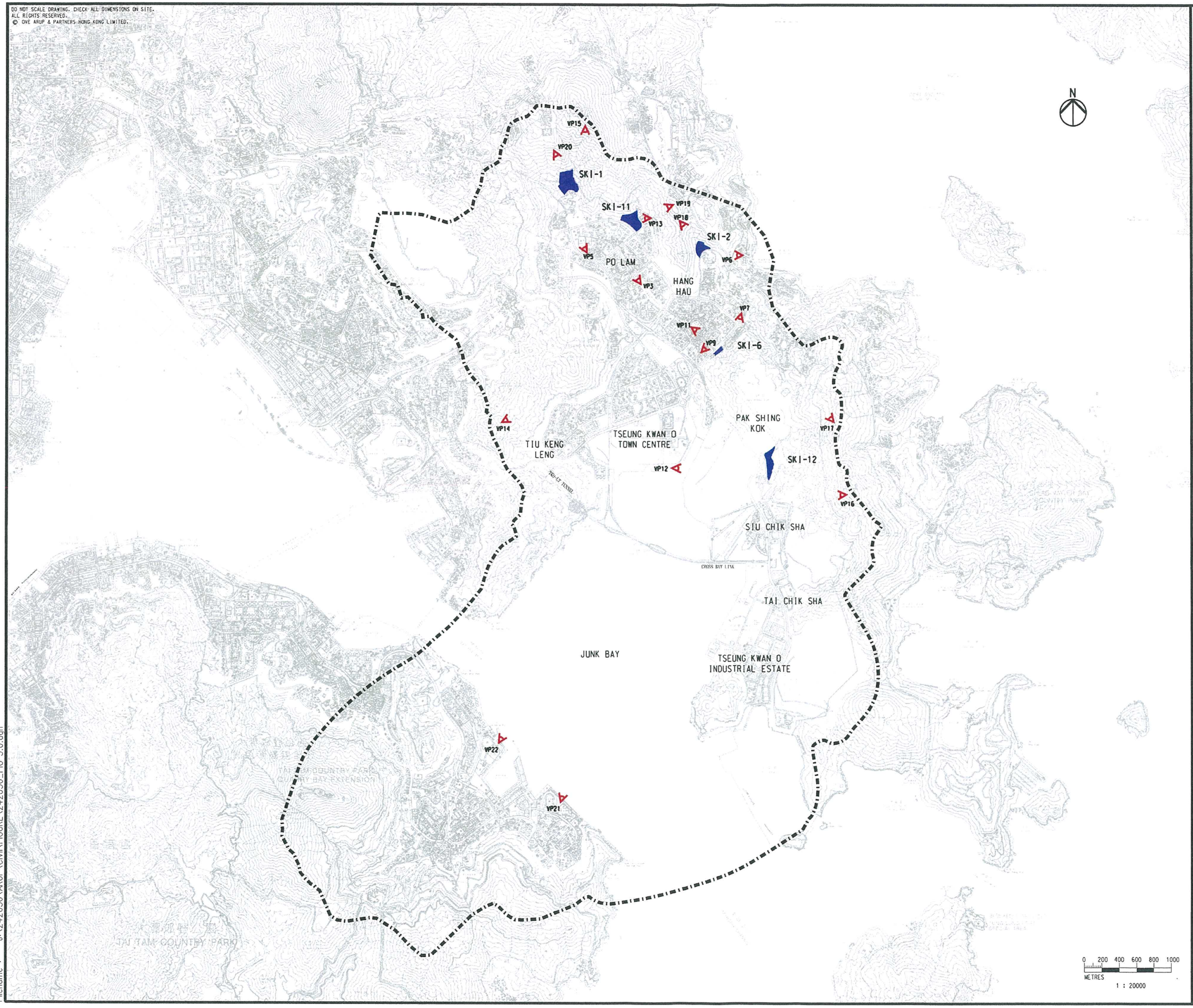

LEGEND :

- VISUAL ENVELOPE
- PROPOSED HOUSING DEVELOPMENT
- VIEW POINTS

Rev	Description	By	Date

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Drawing title

Proposed photomontage view points location

Drawing no.			Rev.
FIGURE 5.0			A
Drawn	Date	Checked	Approved
SYU	09/15	EL	SYC
Scale		Status	
1:20000 @A1			

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Plotted by: 11/09/20
Filename : J:\242030\ARUP\Civil\FIGURE\242030_FIG-3.0.dgn



Existing View from VP3 - Decked Footpath connecting Po Lam MTR station to Tseung Kwan O Swimming Pool



Existing View from VP5 - Pavilion inside Po Tsui Park



Photomontage from VP3 - Decked Footpath connecting Po Lam MTR station to Tseung Kwan O Swimming Pool (with Housing Site)



Photomontage from VP5 - Pavilion inside Po Tsui Park (with Housing Site)

Note: The building height indicated at potential housing sites are the maximum building height (+mPD)

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Photomontage from VP3 & VP5

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FIGURE 5.1		A
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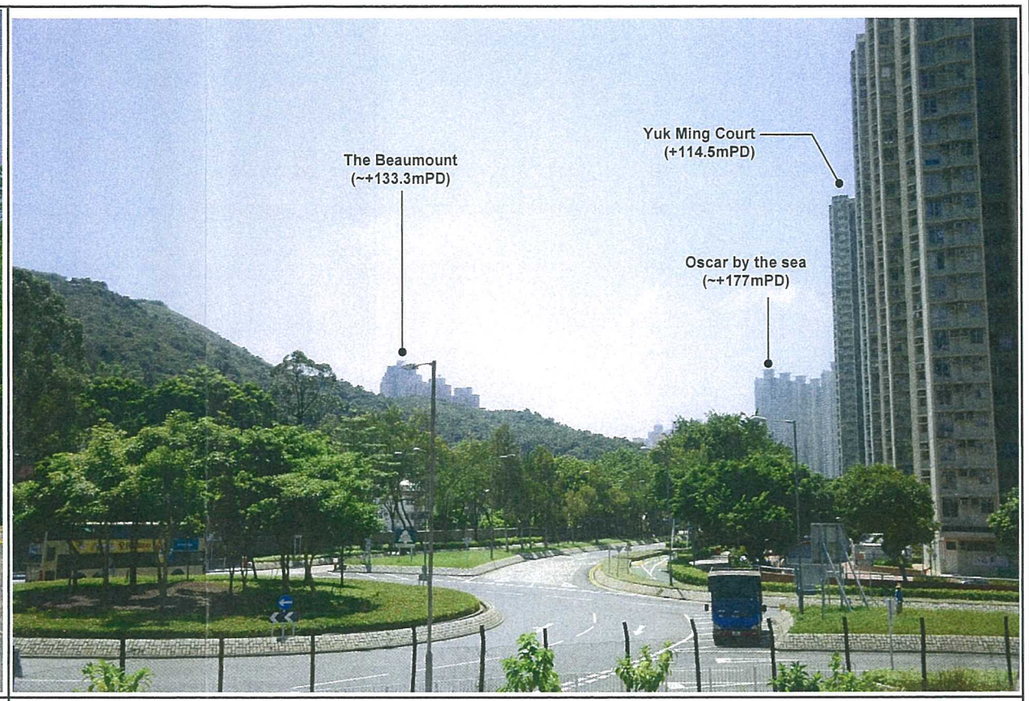
Existing View from VP6 - Silverstrand Beach Public Car Park



Existing View from VP7 - Tseung Kwan O Hospital



Photomontage from VP6 - Silverstrand Beach Public Car Park (with Housing Site)



Photomontage from VP7 - Tseung Kwan O Hospital (with Housing Site)

Note: The building height indicated at potential housing sites are the maximum building height (+mPD)

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Photomontage from VP6 & VP7

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FIGURE 5.2			A
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Existing View from VP9 - Hang Hau Man Kuk Lane Park (facing northeast)



Existing View from VP11 - Hau Tak Shopping Centre



Photomontage from VP9 - Hang Hau Man Kuk Lane Park (facing northeast)
(with Housing Site)



Photomontage from VP11 - Hau Tak Shopping Centre (with Housing Site)

Note: The building height indicated at potential housing sites are the maximum building height (+mPD)

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Drawing title

Photomontage from VP9 & VP11

Drawing no		Rev.
FIGURE 5.3		A
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Existing View from VP12 - Tseung Kwan O Waterfront Promenade



Existing View from VP13 - Yau Yue Wan Village Playground



Photomontage from VP12 - Tseung Kwan O Waterfront Promenade (with Housing Site)



Photomontage from VP13 - Yau Yue Wan Village Playground (with Housing Site)

Note: The building height indicated at potential housing sites are the maximum building height (+mPD)

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Photomontage from VP12 & VP13

Drawing no.		Rev.
FIGURE 5.4		A
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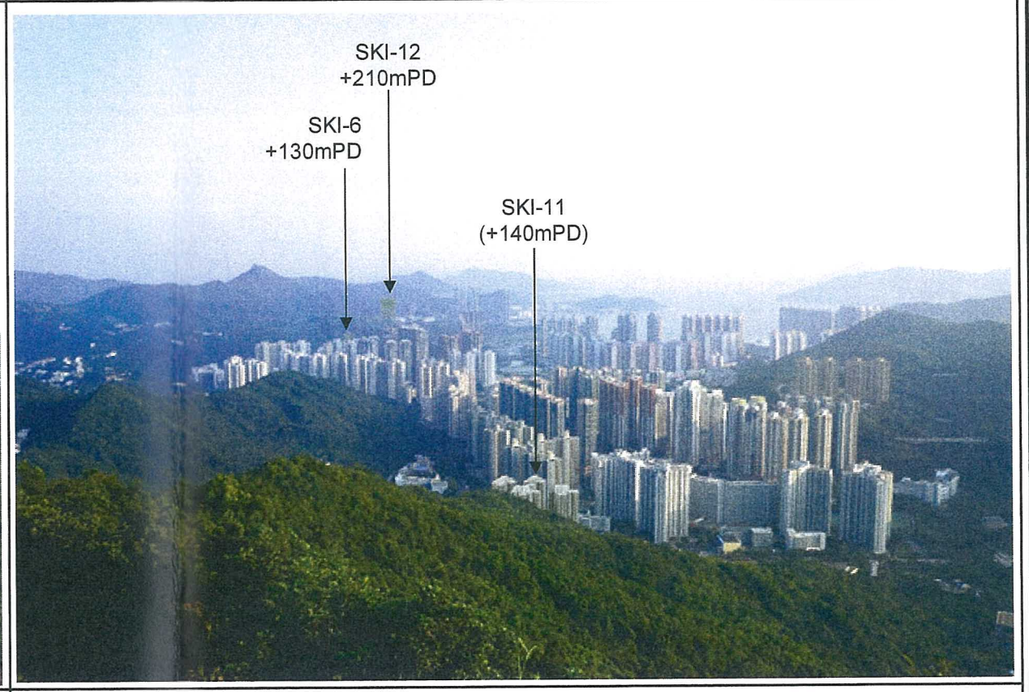
Existing View from VP14 - Wilson Trail Stage 3 (Black Hill facing East)



Existing View from VP15 - Razor Hill



Existing View from VP14 - Wilson Trail Stage 3 (Black Hill facing East)
(with Housing Site)



Photomontage from VP15 - Razor Hill (with Housing Site)

Note: The building height indicated at potential housing sites are the maximum building height (+mPD)

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Photomontage from VP14 & VP15

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FIGURE 5.5			A
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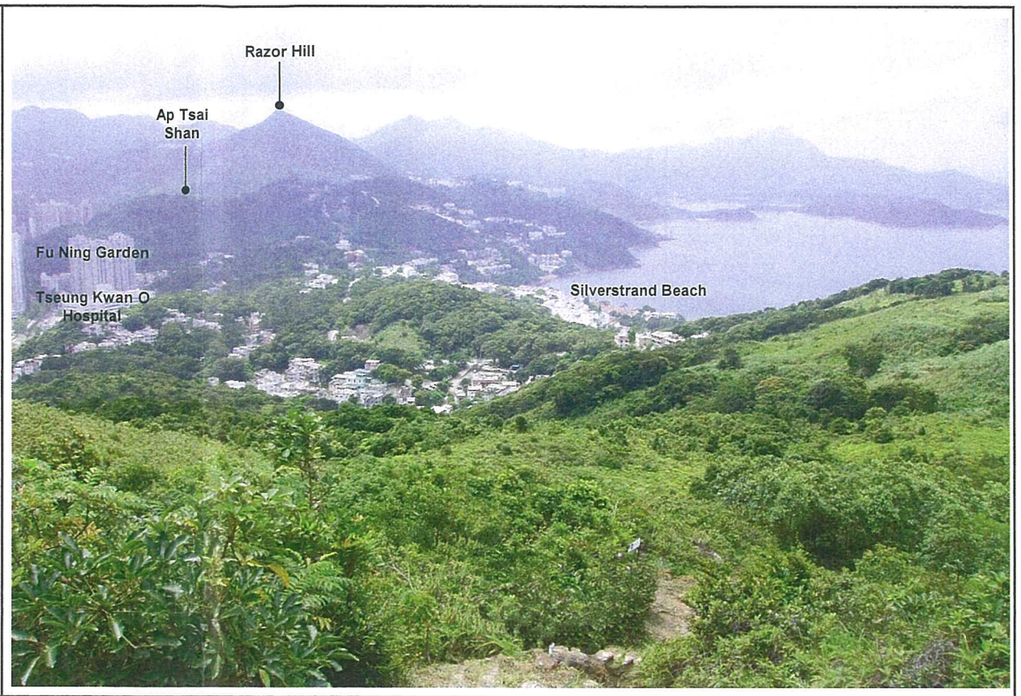
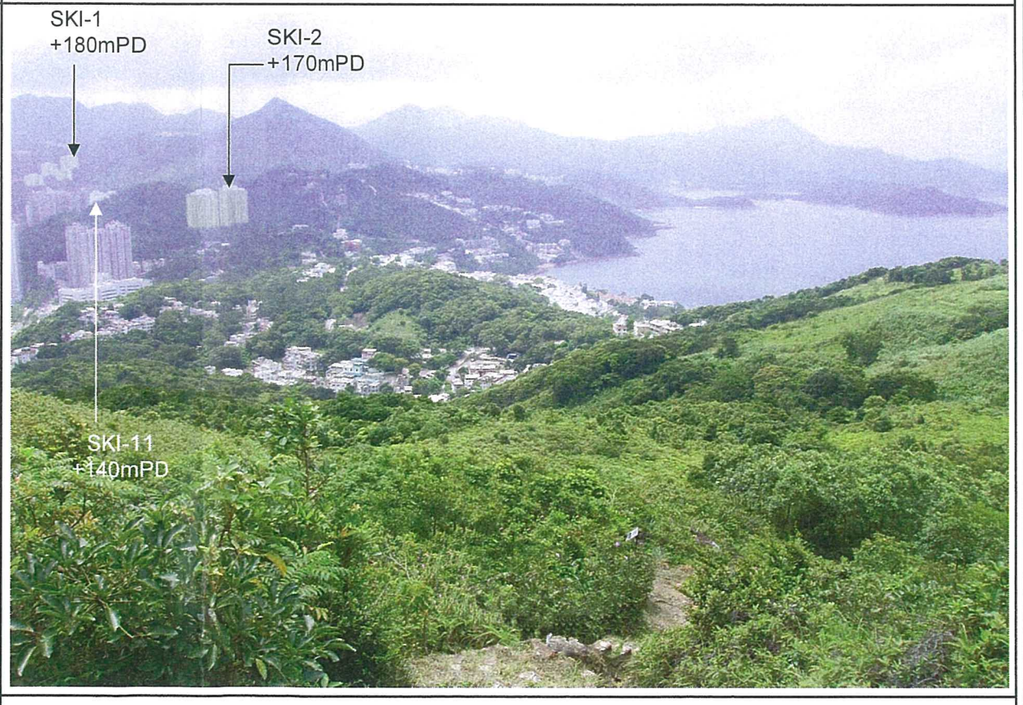
Existing View from VP16 – High Junk Peak



Existing View from VP17 - Clear Water Bay Country Park Trail



Photomontage from VP16 – High Junk Peak (with Housing Site)



Photomontage from VP17 - Clear Water Bay Country Park Trail (with Housing Site)

Note: The building height indicated at potential housing sites are the maximum building height (+mPD)

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Photomontage from VP16 & VP17

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FIGURE 5.6		A
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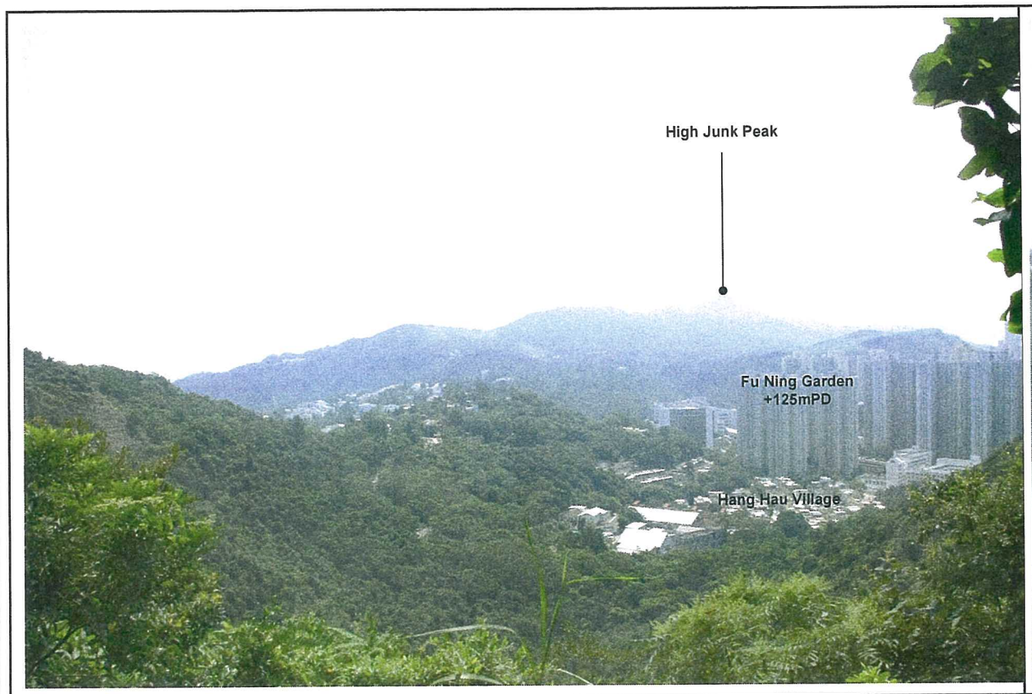
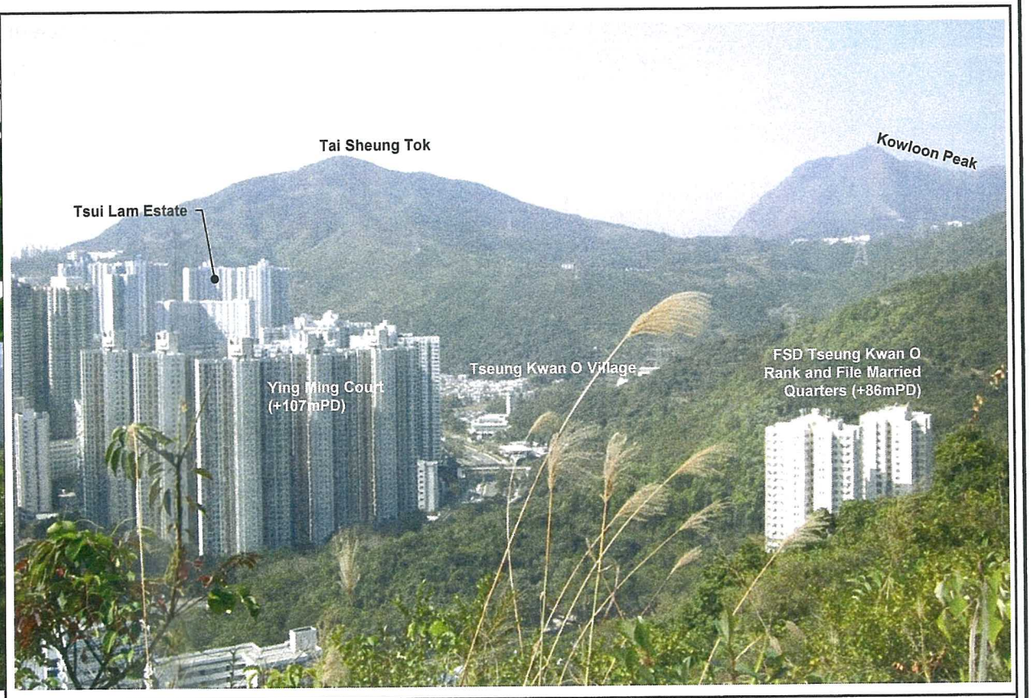


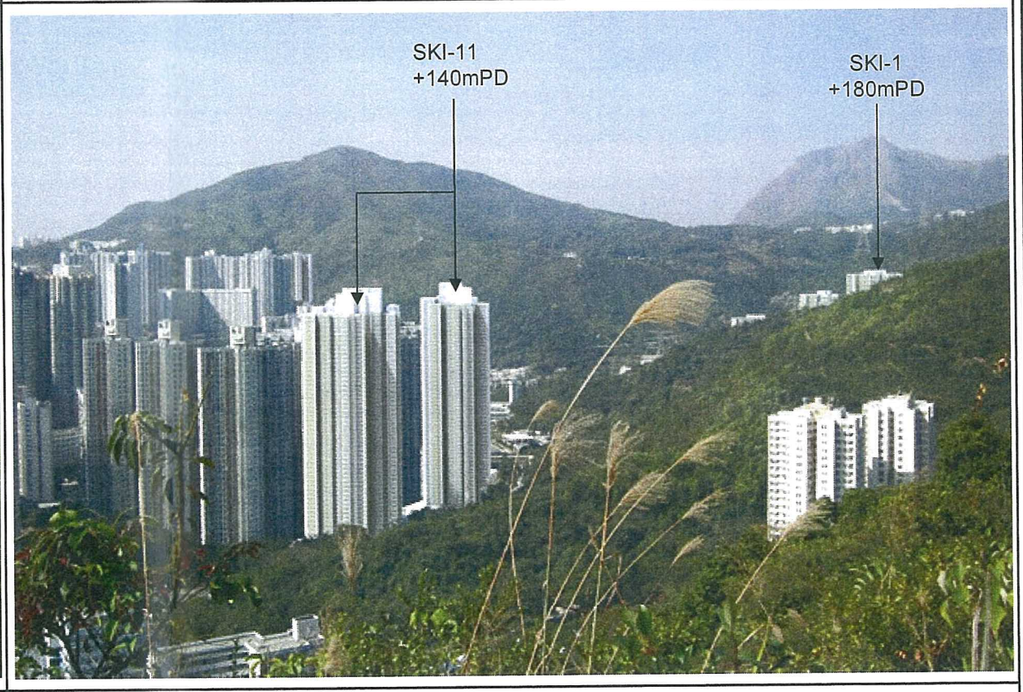
Existing View from VP18 - Ap Tsai Shan (facing south)



Existing View from VP19 - Ap Tsai Shan (northwest)



Photomontage from VP18 - Ap Tsai Shan (facing south)
(with Housing Site)



Photomontage from VP19 - Ap Tsai Shan (northwest)
(with Housing Site)

Note: The building height indicated at potential housing sites are the maximum building height (+mPD)

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Photomontage from VP18 & VP19

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FIGURE 5.7		A
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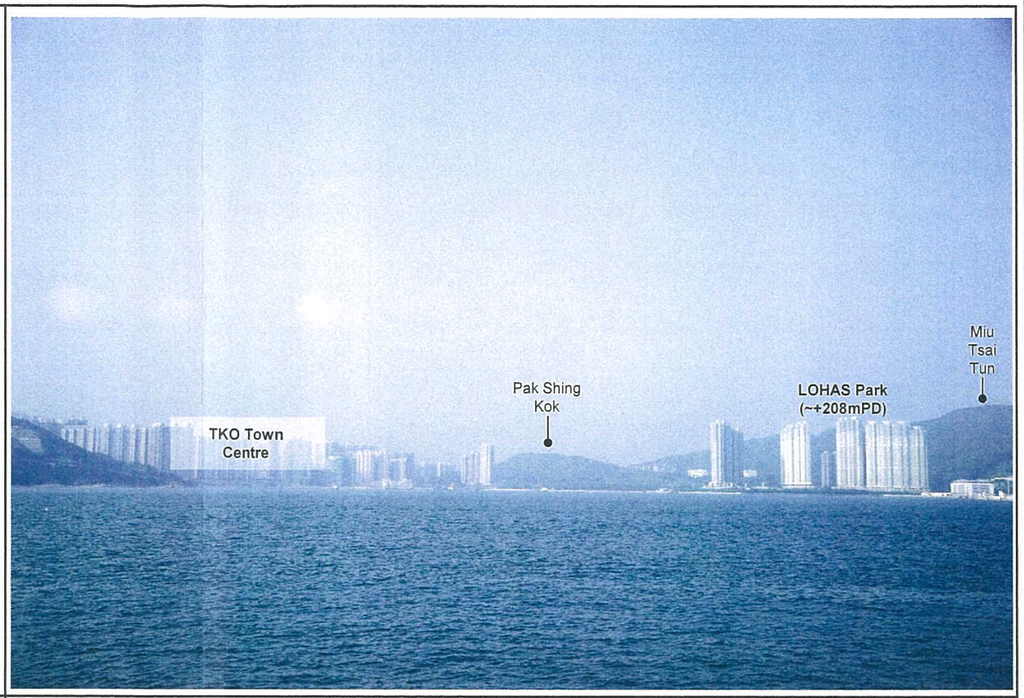
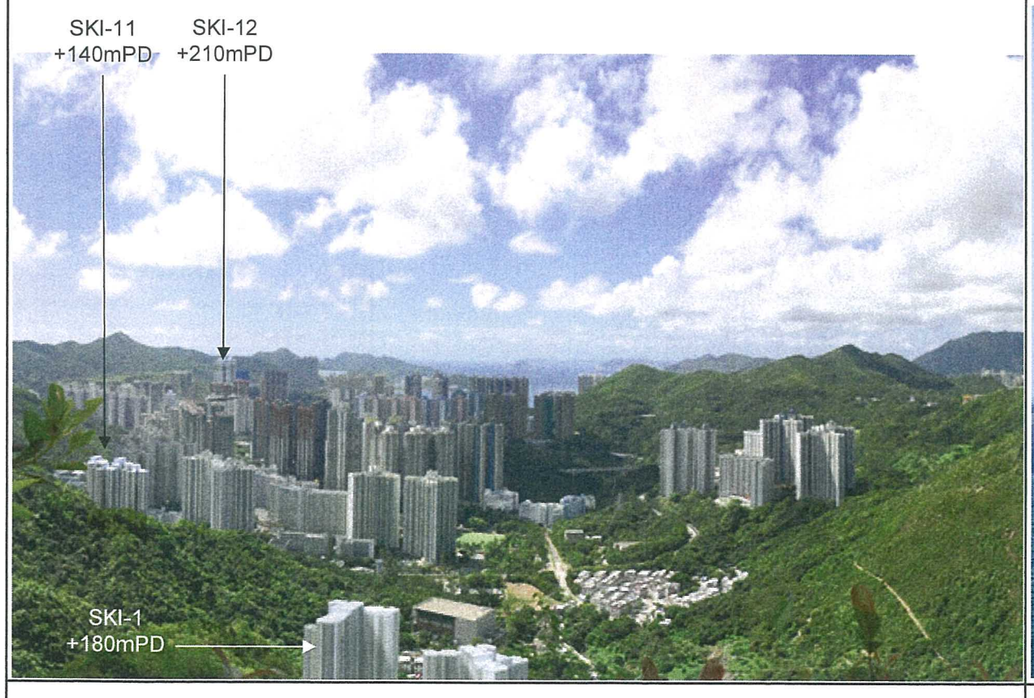
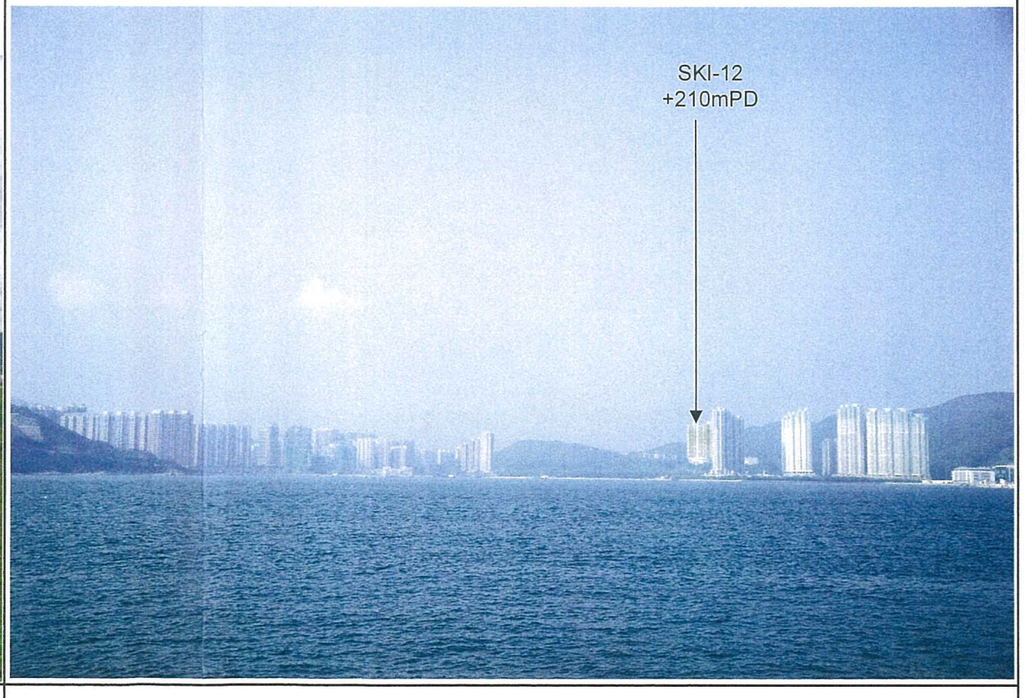
Existing View from VP20 - Wilson Trail Stage 3 (near Rise Park Villas)



Existing View from VP21 - Siu Sai Wan Promenade and Sports Ground



Photomontage from VP20 - Wilson Trail Stage 3 (near Rise Park Villas) (with Housing Site)



Photomontage from VP21 - Siu Sai Wan Promenade and Sports Ground (with Housing Site)

Note: The building height indicated at potential housing sites are the maximum building height (+mPD)

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Photomontage from VP20 & VP21

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FIGURE 5.8		A
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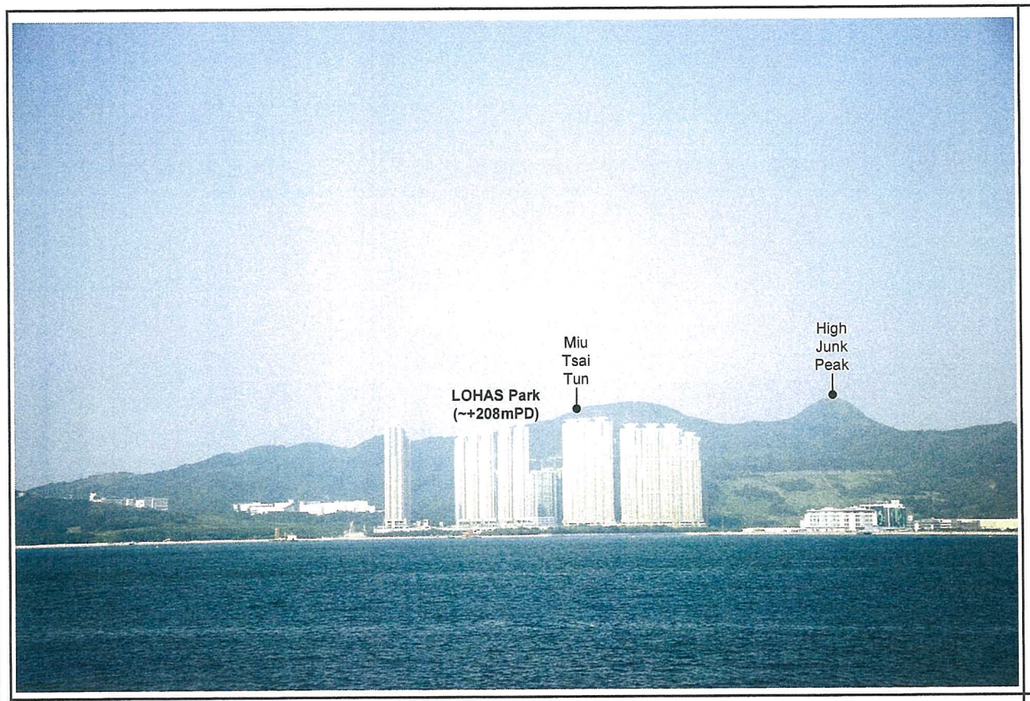

Existing View from VP22 - Hang Fa Chuen Playground and Promenade



Photomontage from VP22 - Hang Fa Chuen Playground and Promenade
(with Housing Site)

Note: The building height indicated at potential housing sites are the maximum building height (+mPD)

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Photomontage from VP22

Drawing no.			Rev.
FIGURE 5.9			A
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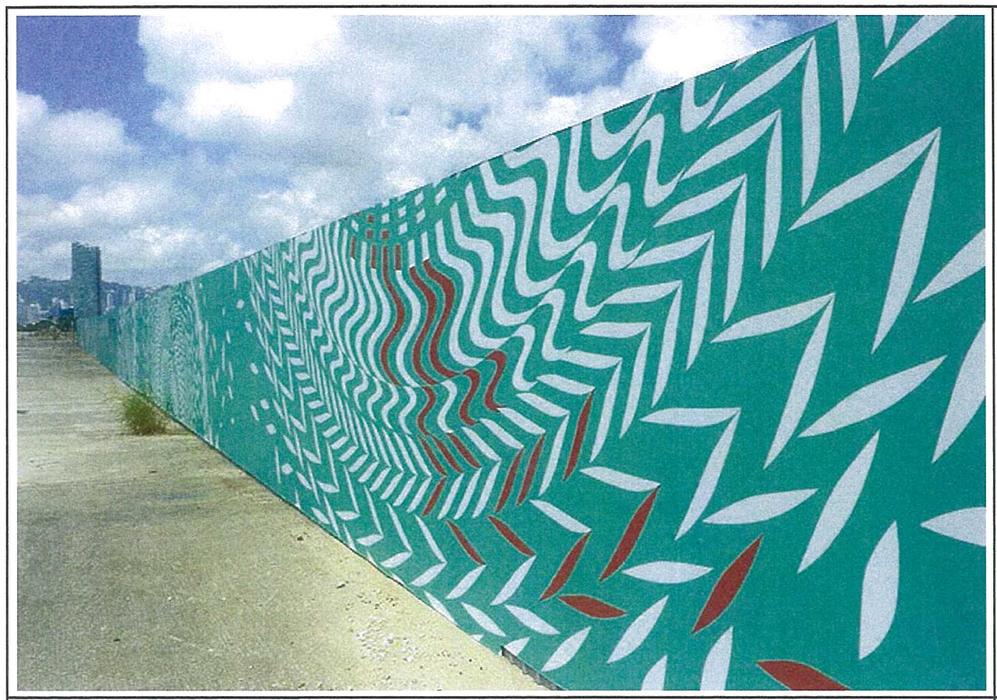
Appendix A1

Example of Decorative Hoarding



Site hoarding pattern at Trade and Industry Tower by Architectural Services Department
Source: http://www.ktd.gov.hk/publiccreatives/en/creatives_in_action.html



Site hoarding pattern at Hong Kong Children's Hospital by Architectural Services Department
Source: http://www.ktd.gov.hk/publiccreatives/en/creatives_in_action.html



Site hoarding pattern at Kai Tak Station, Shatin to Central Link by MTRC
Source: http://www.ktd.gov.hk/publiccreatives/en/creatives_in_action.html



Hoarding lined with artificial turf
Source: http://www.epd.gov.hk/epd/english/greenconstruction/poll_pro/site_boundary.html

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Agreement No. NTE/03/2015
air ventilation and visual impact assessments for potential Housing sites in the vicinity of Tseung Kwan O – FS

Drawing title
EXAMPLE OF DECORATIVE HOARDING

Drawing no.		Rev.
Appendix A1		
Drawn: SYU	Date: 10/15	Checked: KC / Approved: SYC
Scale: 1:10000 @A1	Status: DRAFT	

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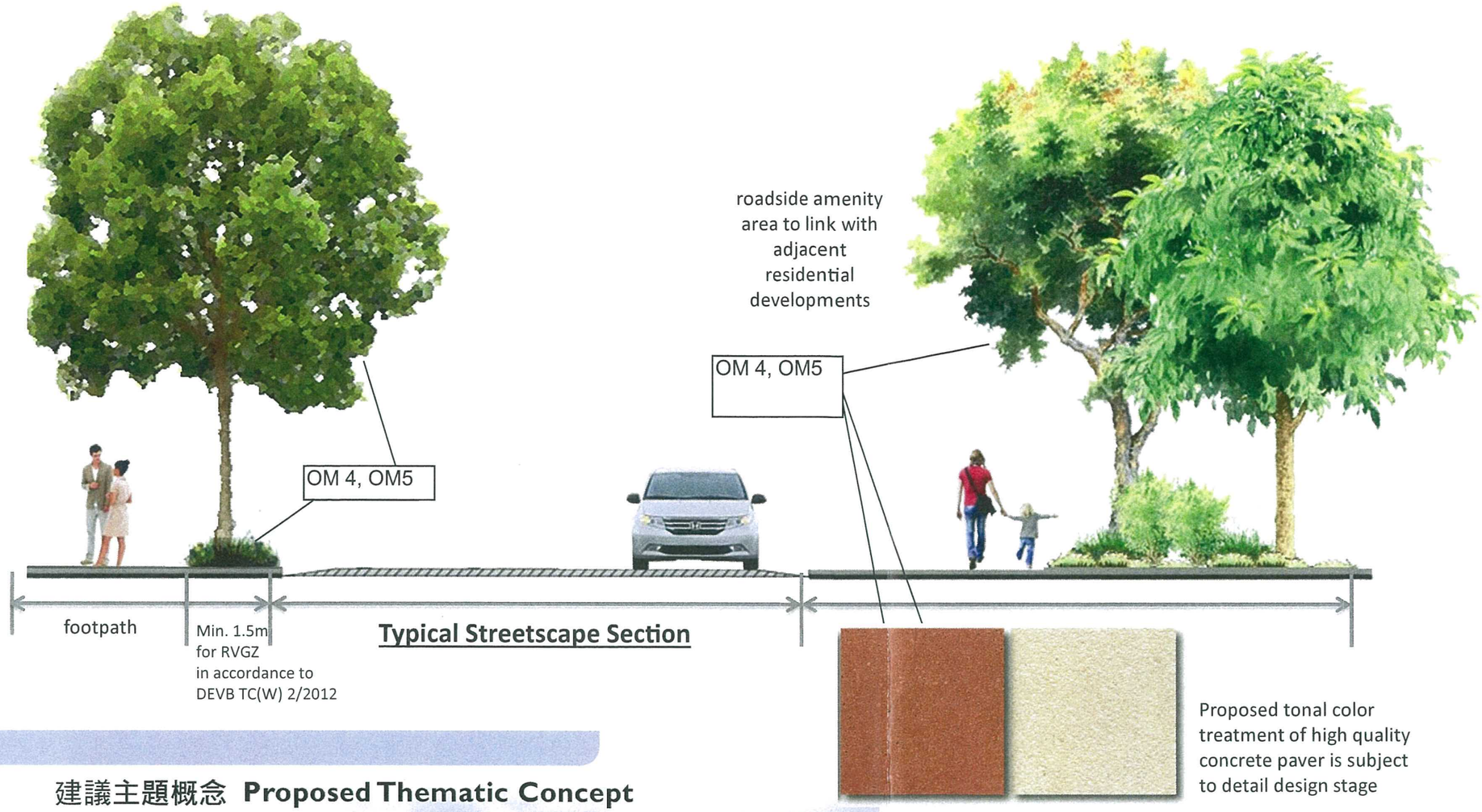
Appendix A2

Conceptual Streetscape Design



Typical Streetscape Section

Proposed tonal color treatment of high quality concrete paver is subject to detail design stage

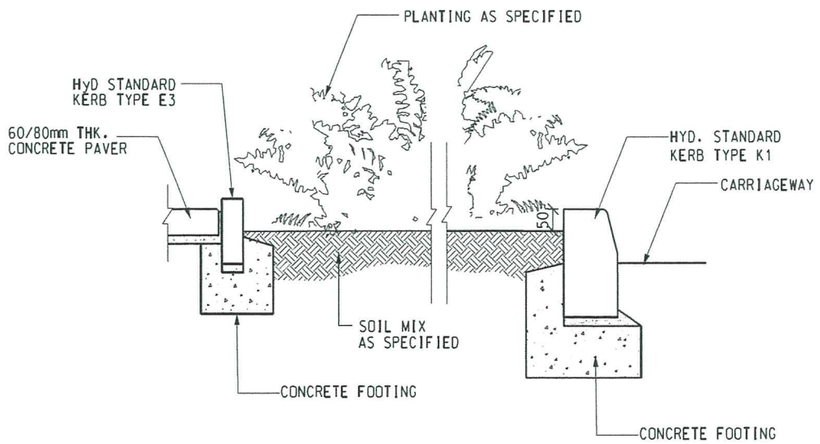
NOTE: Proposed Streetscape shown in this drawing does not indicate selection of trees planting/ vegetation. The proposal for landscape works shall be determined and agreed separately with government during Detailed Design Stage. Landscaping features and form of structures shown in this drawing are indicative only. Color and paving pattern will be congruent with District Paving Master Plan or existing paving in adjacent areas.

建議主題概念 Proposed Thematic Concept



將軍澳是個環保、健康和活力的新型居住城市。將軍澳綠化主題的初步構想是：「以有花或香味的植物，營造一個舒適的居住環境。」
Tseung Kwan O (TKO) is a young and energetic new town for living. The use of flowering and fragrant species is in response to creating quality of living.

All landscape design should be congruent with current Tseung Kwan O Greening Master Plan
Source: http://www.districtcouncils.gov.hk/



RAISED PLANTERS DETAILS (OM5)
Enhance pedestrian-friendly environment the continuity of planting scheme/ the planting strip/planters to be provided where practicable

Rev	Description	By	Date

Consultant
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Contract No. and Title
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Drawing title
CONCEPTUAL STREETSCAPE DESIGN

Drawing no.		Rev.
Appendix A2		
Drawn: SYU	Date: 10/15	Checked: KC / Approved: SYC
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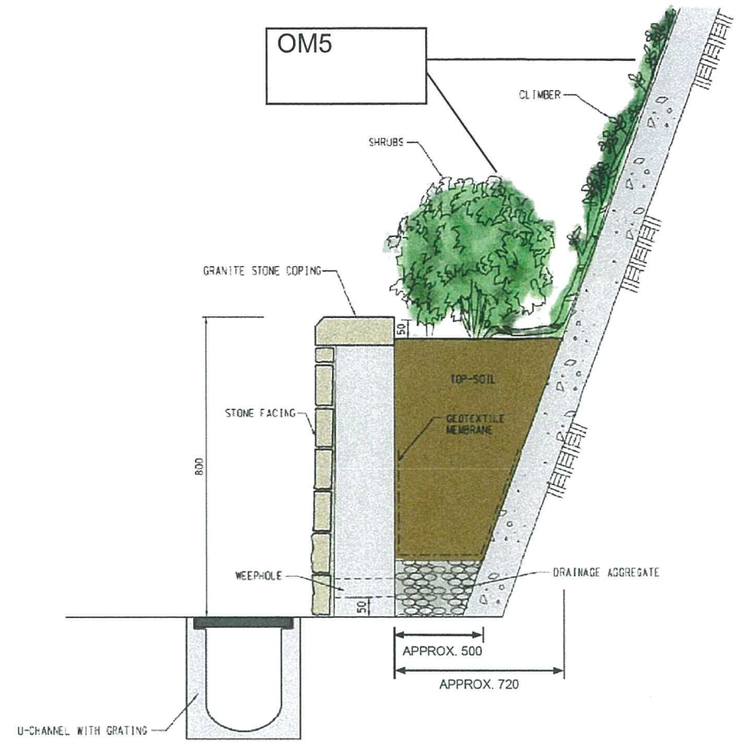
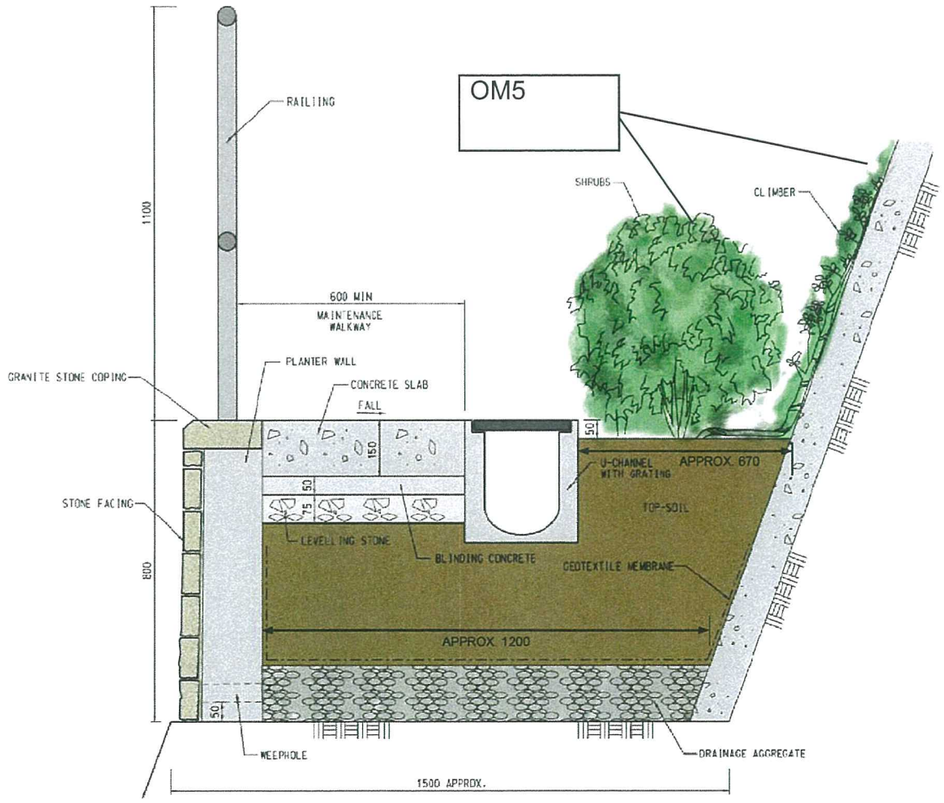
Appendix A3

Typical Landscape Treatment on Slope



TYPICAL SECTION FOR TOE PLANTER
(DIMENSIONS IN mm)



TYPICAL SECTION FOR BERM PLANTER
(DIMENSIONS IN mm)

Vegetation Type	Minimum Depth of Existing Soil or Placed Soil-mix Material over Inert Rock/Rockfill Substrate	Preferred Soil Depth
Grass	150 mm	300 mm
Groundcover/ Climbers	300 mm	600 mm
Shrubs	450 mm	900 mm
Trees	800 mm	>1200 mm

NOTE: Proposed Landscape Treatment on slope shown in this drawing is conceptual only. Slope features and profile will be designed in accordance with **GEO Publication No. 6/2007** – (Updating of GEO Publication no. 1/2000 - Technical Guidelines on Landscape Treatment and Bio-engineering for Manmade Slopes and Retaining Walls)/ **GEO 1/2011 - Technical Guidelines on Landscaping Treatment for Slopes** in adjacent development at Detail Design Stage.

Rev	Description	By	Date

Consultant
ARUP

Contract No. and Title
Agreement No. NTE/03/2015
air ventilation and visual impact assessments for potential Housing sites in the vicinity of Tseung Kwan O – FS

Drawing title
TYPICAL LANDSCAPE TREATMENT ON SLOPE

Drawing no. Appendix A3 | Rev.

Drawn	Date	Checked	Approved
SYU	10/15	KC	SYC

Scale 1:10000 @A1 | Status DRAFT

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Civil Engineering and Development Department

Civil Engineering and Development Department

Air Ventilation and Visual Impact Assessments for Potential Housing Sites in the vicinity of Tseung Kwan O - Feasibility Study

Air Ventilation Assessment (Expert Evaluation) Report - 5 Sites

REP/AVA-DH/F03

Issue 3 | 9 June 2017

This report takes into account the particular instructions and requirements of our client.

It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

Job number 245001-01

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ARUP

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1 Background

CEDD commissioned Arup on 28 January 2015 to undertake 'Agreement No. CE 61/2014(CE) – Site Formation and Infrastructural Works for Nine Housing Sites in Tseung Kwan O – Feasibility Study'.

The 9 potential housing sites are scattered in Tseung Kwan O (TKO). These sites are mainly zoned "Green Belt" with minor portion of "G/IC" under the current Outline Zoning Plan. In consideration of various technical aspects and anticipated programme effect, amongst the 9 potential housing sites in TKO, the following 5 housing sites have the potential to provide about 11,260 number of flats as the first development package. On the basis of the findings of the Assignment, no insurmountable technical problems are anticipated for development of these 5 potential housing sites:

1. Site SKI-1, North of Tseung Kwan O Village;
2. Site SKI-2, Northwest of Ying Yip Road;
3. Site SKI-6, South of Chiu Shun Road;
4. Site SKI-11, West of Yau Yue Wan Village; and
5. Site SKI-12, East of Movie City.

On the other hand, a further study on the following 4 potential housing sites in TKO is recommended:

1. Site SKI-3, West of Tsui Lam Estate;
2. Site SKI-4, Bus Terminus, South of Hong Sing Garden and North of Mau Wu Tsai;
3. Site SKI-5, North of Po Lam Road South; and
4. Site SKI-13, South of Po Lam Road.

As per instruction from CEDD, Arup consolidated the findings of the Assignment and prepare technical reports for rezoning of the 5 Sites SKI-1, 2, 6, 11 and 12.

2 Introduction

Ove Arup and Partners Hong Kong Limited (Arup) was commissioned by Civil Engineering and Development Department (CEDD) to provide an expert evaluation on the conceptual layout plans of the 4 potential housing sites in the vicinity of Tseung Kwan O from an air ventilation perspective. The conceptual layout plans are for assessment purpose only and are subject to revisions. Housing scheme will be further developed at the next stage of the Project. This air ventilation assessment (AVA) is based on the methodology of Air Ventilation Assessment as set out in Technical Circular No. 1/06 issued jointly by Housing, Planning and Lands Bureau (HPLB) and Environment, Transport and Works Bureau (ETWB) and its Annex A – Technical Guide for Air Ventilation Assessment for Development in Hong Kong.

AVA has been carried out for SKI-1, 2, 11 and 12 in the form of an Expert Evaluation in accordance with the above mentioned Technical Guide.

For Site SKI-6 at Chiu Shun Road, it is proposed for a single domestic tower at a maximum building height of 130 mPD on a proposed low-rise non-domestic podium at a maximum 0.5 plot ratio. According to the pre-consultancy assessment provided by PlanD, the annual prevailing winds of Site SKI-6 are E, ENE and NNE, while the summer prevailing winds are SSW, SW, S and E. The proposed development would not affect the width of Chiu Shun Road and hence, the ventilation performance of Chiu Shun Road as a wind corridor under NNE, SSW and SW winds would not be affected by the proposal. While some localized impact on the immediate vicinity of the proposed development is expected under E, ENE and S winds, it is anticipated that the proposal, with only a single domestic tower and a relatively small and low-rise podium allowing prevailing wind to skim over, would not impose significant impact on the overall pedestrian wind environment. Therefore, assessment in this report will only cover SKI-1, 2, 11 and 12 as under the project agreement.

3 Objective of the Study

The objective of this assignment is to assess the likely impact of the conceptual layout plan for the 4 potential housing sites in the vicinity of Tseung Kwan O (SKI-1, SKI-2, SKI-11, and SKI-12) on the pedestrian wind environment as compared to the existing condition.

4 Study Scope

The scope of work includes the tasks as follows

- To identify any potential problem areas due to the potential housing sites;
- To assess the conceptual layout's impact on surrounding areas and to provide recommendations on mitigation measures;
- To identify any key ventilation corridors to be preserved or reserved;
- To advise whether any more detailed study is required for the potential housing sites and the scope of the detailed study required.

5 Study Area

5.1 Potential Housing Sites to Conduct AVA

The study includes 4 potential housing sites within the vicinity of Tseung Kwan O. The potential housing sites are dispersed around Tseung Kwan O, including sites within Po Lam Sub Area, Hang Hau Sub-Area, and South-eastern Area. Below is the list of potential housing sites and its location description:

Table 1 Location Description of Potential Housing Sites

Site ID	Location Description
SKI-1	North of Tseung Kwan O Village North of Po Lam Town Centre
SKI-2	Northwest of Ying Yip Road North of Hang Hau Town Centre Northern tip of Ying Yip Road, opposite of Clear Water Bay Film Studio
SKI-11	West of Yau Yue Wan Village North-eastern area of Po Lam Town Centre East of Ying Ming Court
SKI-12	East of Hong Kong Movie City Northeast of LOHAS Park

The potential housing sites are shown in Figure 1.

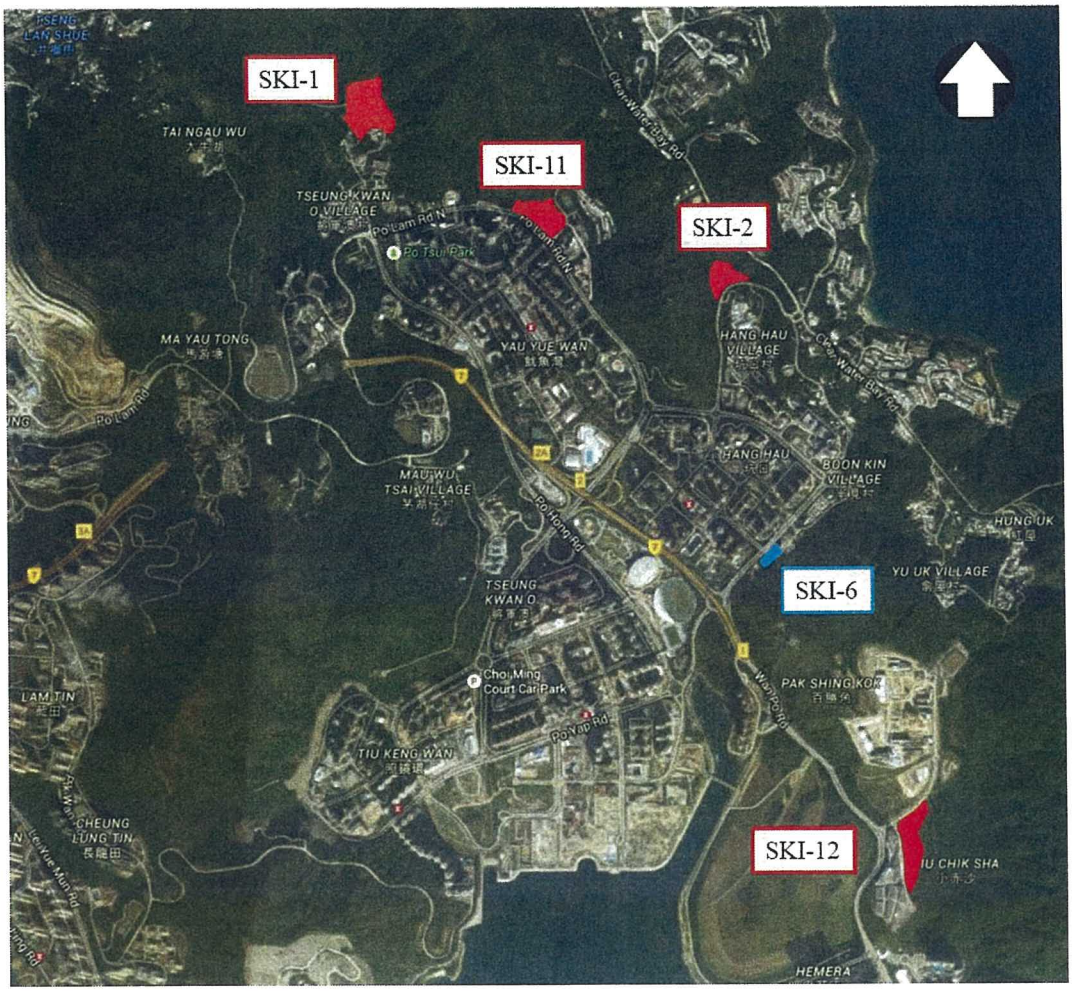


Figure 1 Location Plan of Potential Housing Sites to Conduct AVA Expert Evaluation

(*) Note: SKI-6, as highlighted in teal, is not included in the AVA-EE study as described in Section 2.

6 Wind Availability

The wind availability of the site is an essential item to investigate the wind performance at the numerous developments. The wind availability analysis is based on the long term measurement data prepared by Hong Kong Observatory (HKO), experimental wind availability data prepared under the consultancy titled "Urban Climatic Map and Standards for Wind Environment – Feasibility Study" (*Wind Tunnel Study*), and the simulated site wind availability data using Regional Atmospheric Modelling System (*RAMS*) under the "Consultancy Study on Establishment of Simulated Site Wind Availability Data for Air Ventilation Assessments in Hong Kong" provided by PlanD.

6.1 Measurement Data at Weather Station

HKO weather monitoring stations are scattered around Hong Kong providing reliable data of localized wind environment. The weather station at Haven of Hope Hospital (Junk Bay) is located within the study area. The ground level of the weather station is 38mPD and the anemometer elevation of 52mPD.

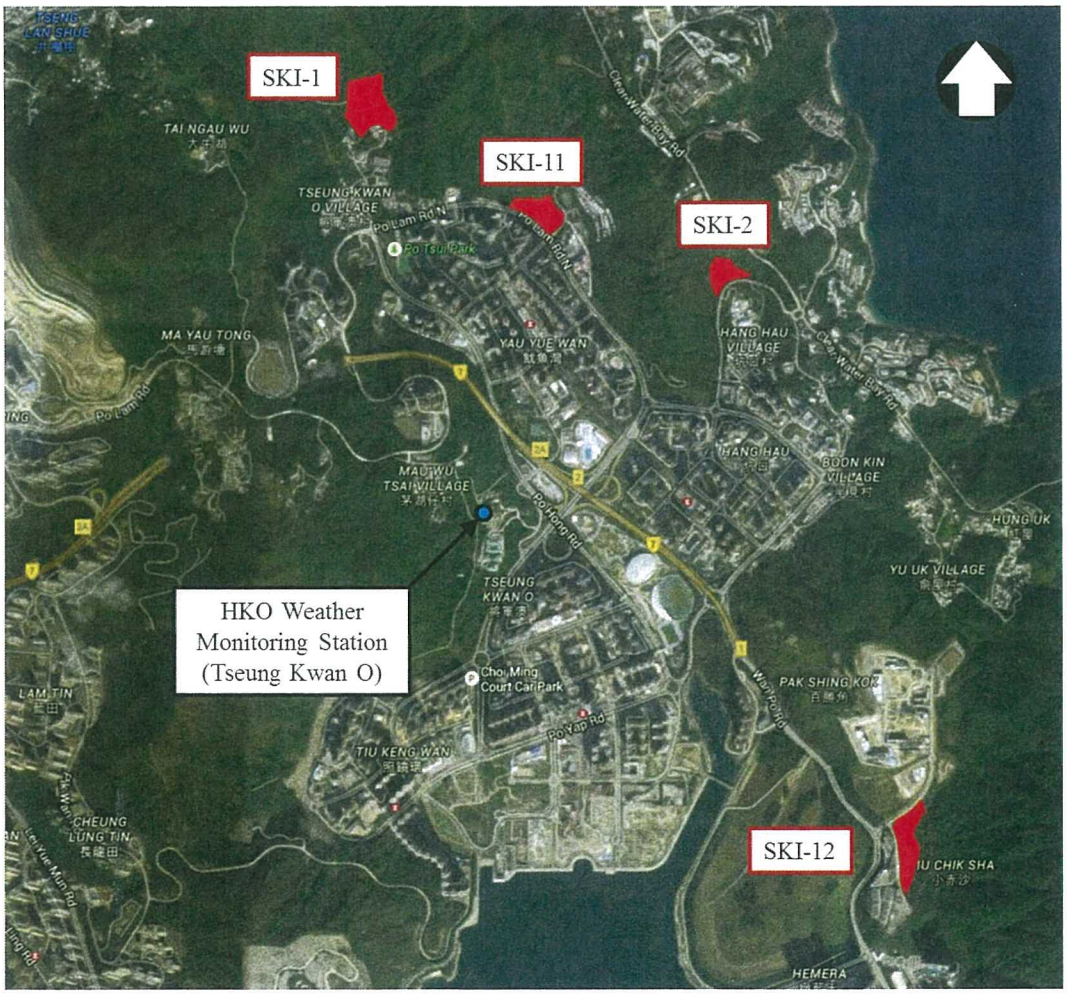


Figure 2 Location of HKO Weather Monitoring Station

The annual wind rose and the wind rose for June, July, and August (summer months) are shown in Figure 3.

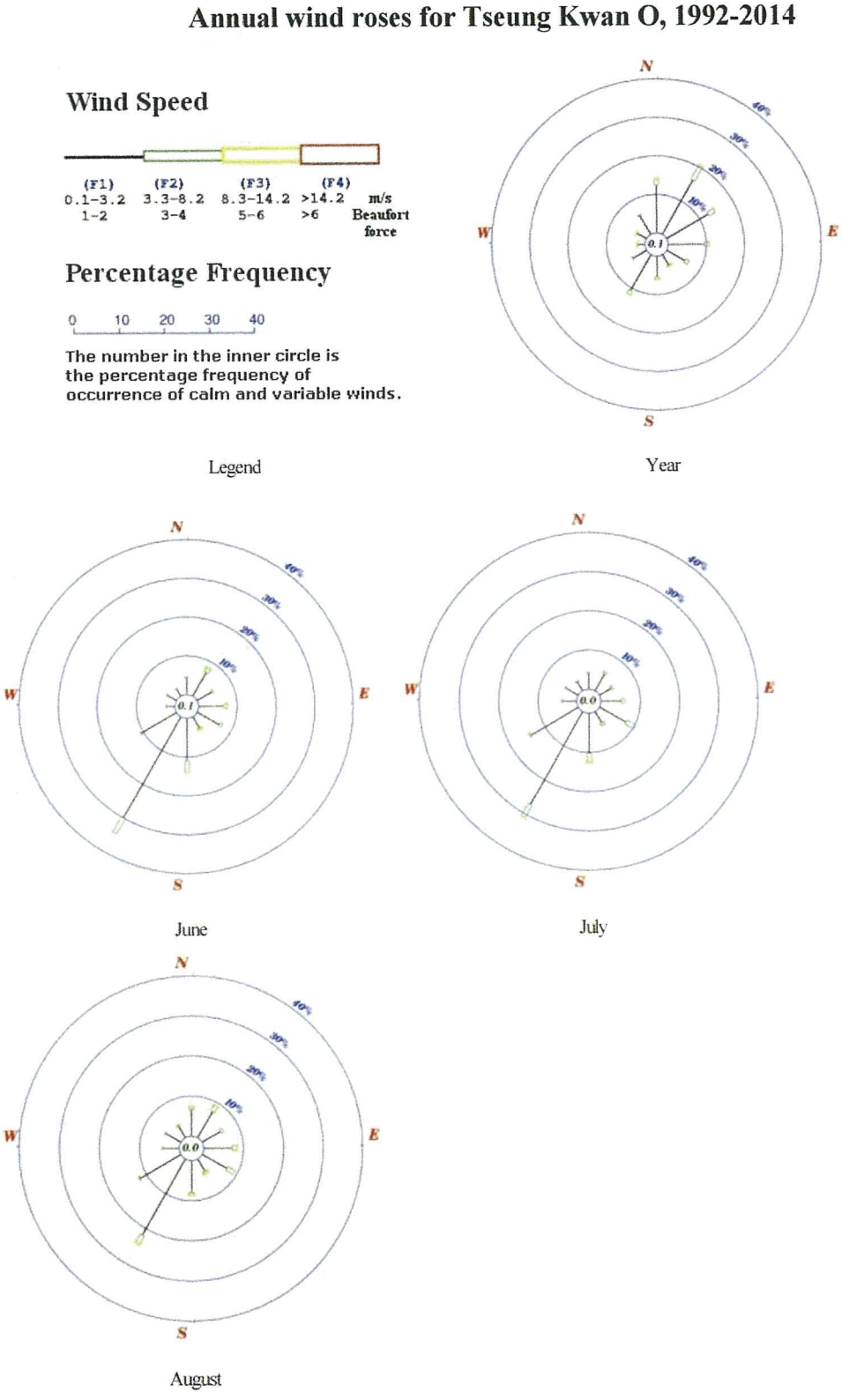


Figure 3 Annual, June, July, and August Wind Rose for Tseung Kwan O Automatic Weather Monitoring Station

According to the historical data, the annual prevailing winds are NNE winds and the summer prevailing winds are SW winds.

However, the weather station is situated within Haven of Hope Hospital, which have buildings of height reaching 70mPD. In addition, the weather station is located on the foot of the mountain. As the anemometer elevation is of 52mPD, it will be affected by both the topography and surrounding building landscape easily. It is also observed that the measured wind data is on the low side.

Due to the sites being some distance away from the weather station, the localized wind data from the weather station will not be relevant.

6.2 Experimental Site Wind Availability Data

A study of wind availability and characteristics for a nominated Study Area in Tseung Kwan O was conducted by the CLP Wind/Wave Tunnel Facility (WWTF) at The Hong Kong University of Science and Technology, as part of the "Urban Climate Map and Standards for Wind Environment – Feasibility Study". The nominated Study Area is shown in Figure 4.

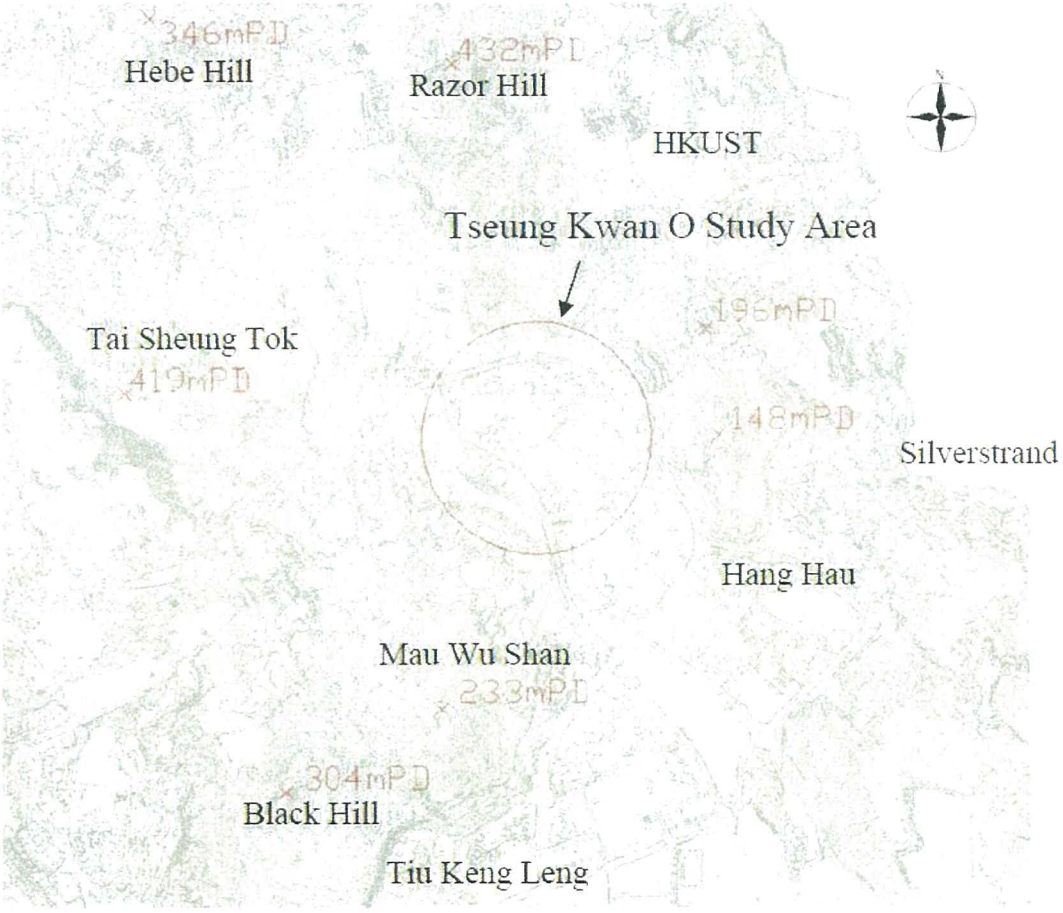


Figure 4 Study Area of the Experimental Site Wind Study

The study area is located in Po Lam. The resulting annual and summer wind rose of the study is shown in Figure 5 to Figure 10.

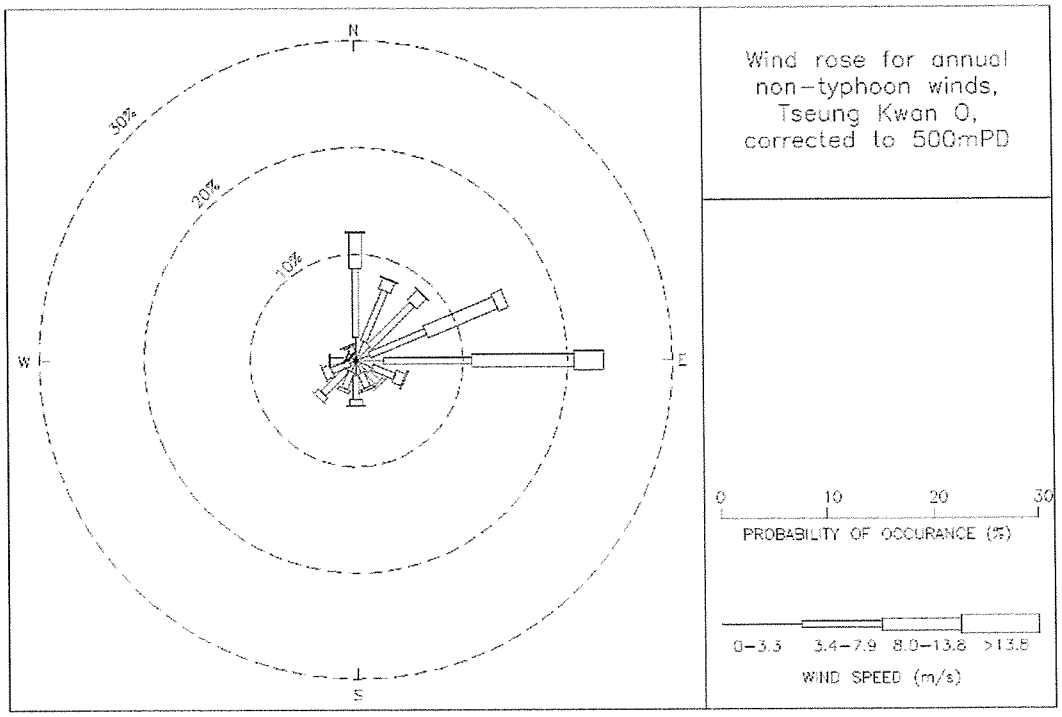


Figure 5 Wind Rose for Annual Non-Typhoon Winds, TKO, Corrected to 500mPD

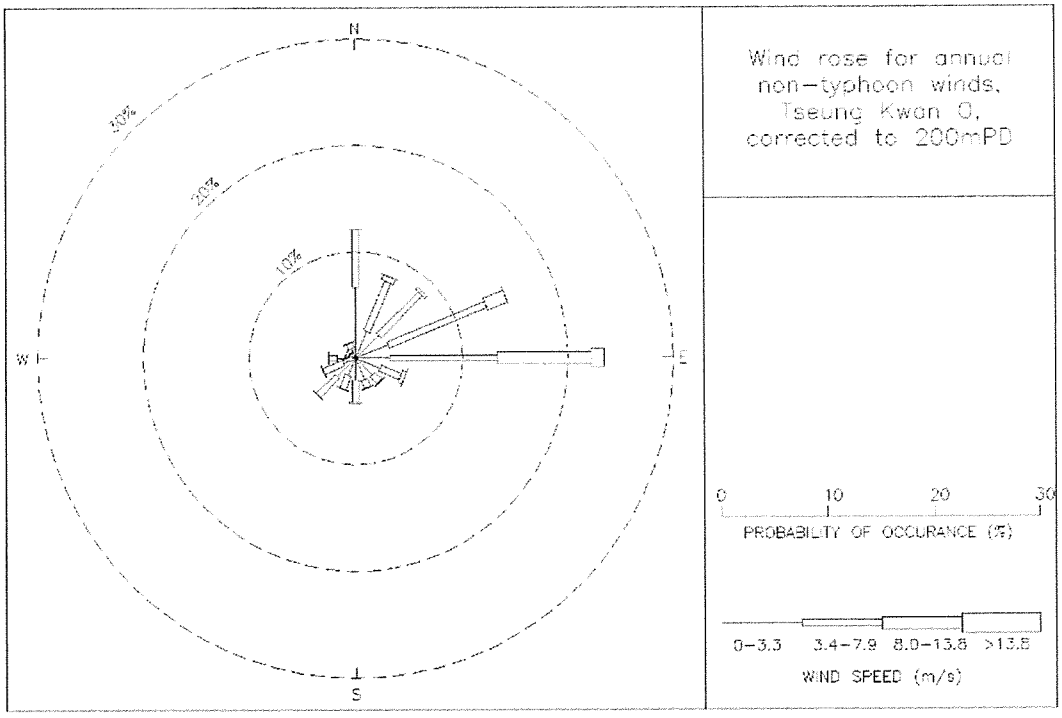


Figure 6 Wind Rose for Annual Non-Typhoon Winds, TKO, Corrected to 200mPD

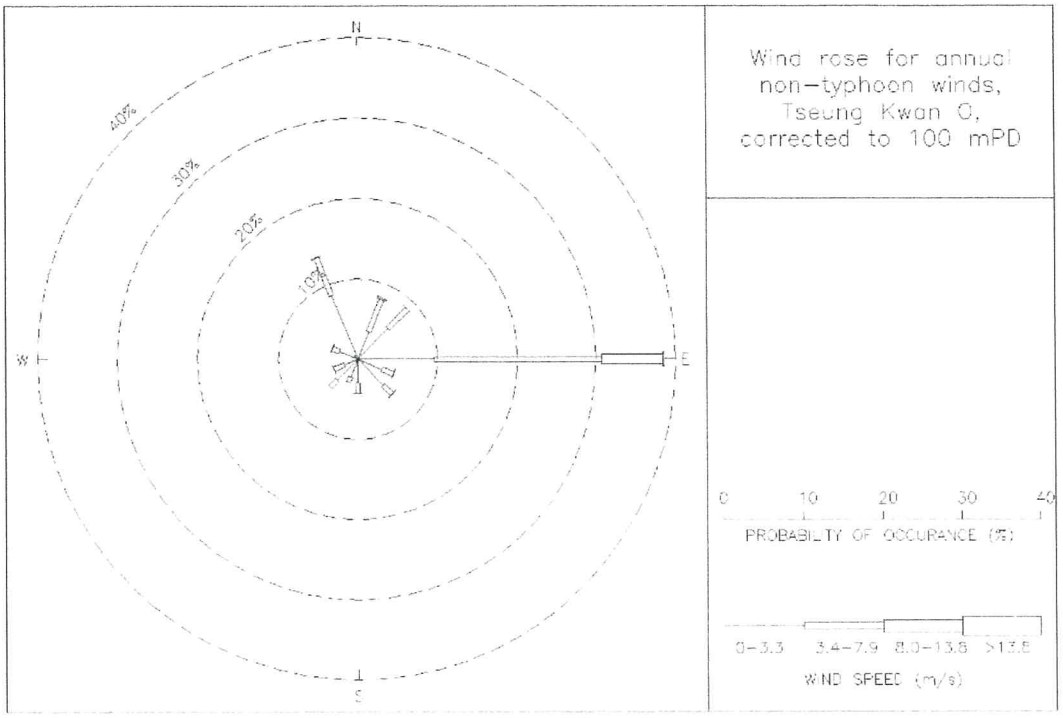


Figure 7 Wind Rose for Annual Non-Typhoon Winds, TKO, Corrected to 100mPD

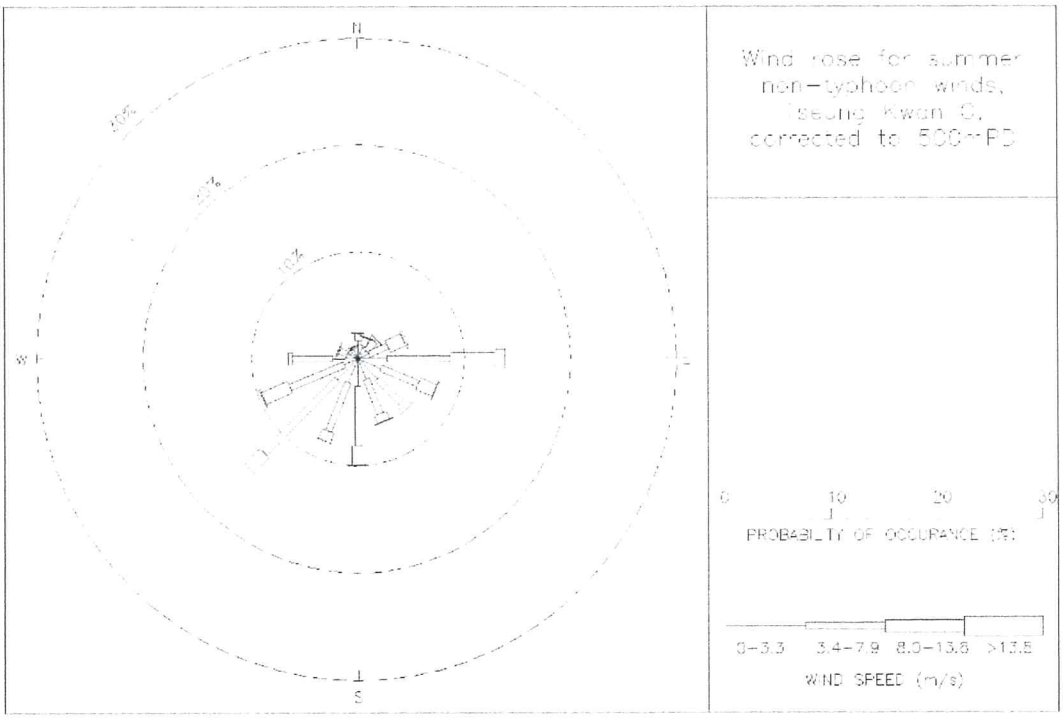


Figure 8 Wind Rose for Summer Non-Typhoon Winds, TKO, Corrected to 500mPD

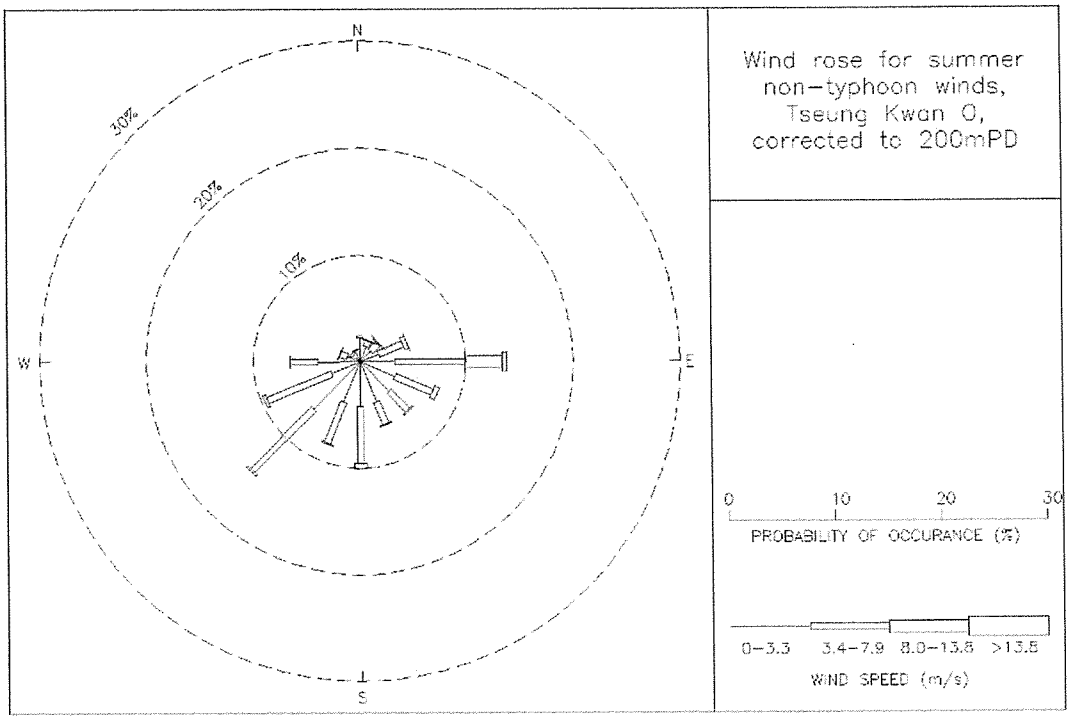


Figure 9 Wind Rose for Summer Non-Typhoon Winds, TKO, Corrected to 200mPD

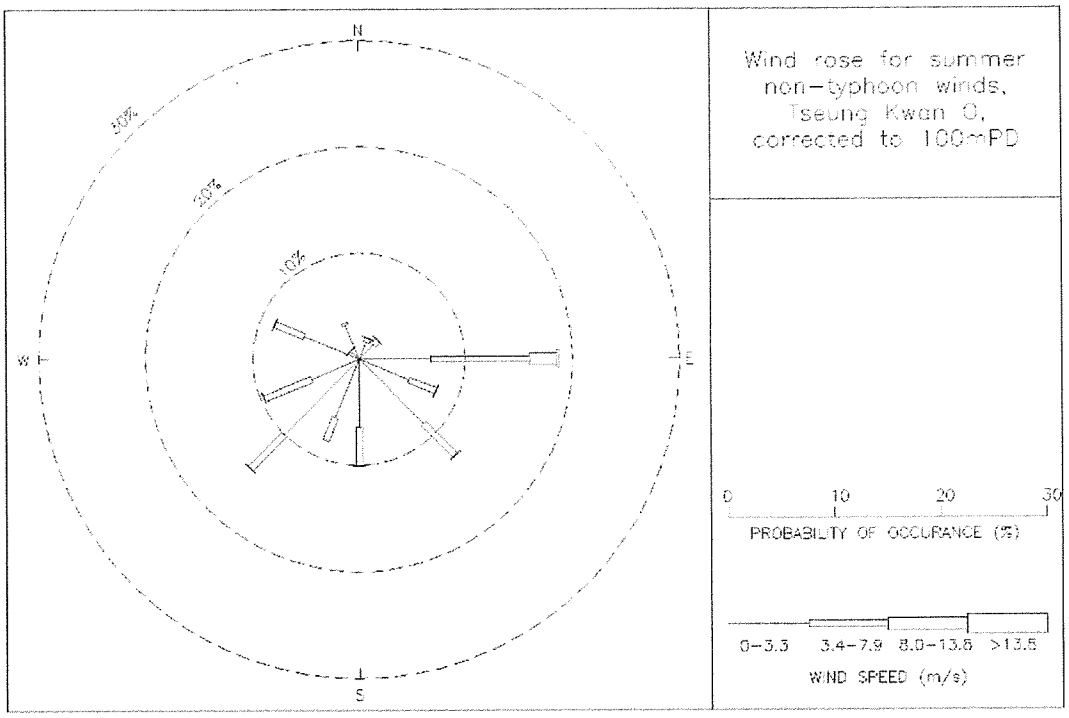


Figure 10 Wind Rose for Summer Non-Typhoon Winds, TKO, Corrected to 100mPD

From the above results, it can be shown that the annual prevailing wind directions range from N to E winds, where easterly wind has the highest frequency. The frequency of winds at 200mPD, slightly the urban canopy of Po Lam, and at 500mPD is near identical, where the only difference is the reduction of wind speed at lower levels. At 100mPD, the wind will be affected by the localized environment

(i.e. building landscape), where NNW becomes the major prevailing wind, which is the wind direction aligning with the road network of Po Lam.

During the summer months, the prevailing wind directions are SW and E, with S wind direction also of significance. Similarly, the wind frequencies at 500mPD and 200mPD is similar, where the only difference is the decreased wind speed at lower levels. At 100mPD, the wind is affected by the local environment where winds align with the local road network, resulting in SE and NW winds reporting higher frequencies as compared to higher-level winds

These observations are only valid for the aforementioned study area. There is 1 potential housing site (SKI-11) within the study area and 2 potential housing sites (SKI-1 and SKI-2) within a close vicinity of the study area, the potential housing sites in relation to the study area is shown in Figure 11. However, as Duckling Hill stands between the study area and SKI-2, the wind availability at SKI-2 will be different from that of the study area. Thus, the wind availability of SKI-2 will not reference the *Wind Tunnel Study* data. The wind availability at the other mentioned potential housing sites should take into account the findings of this section.

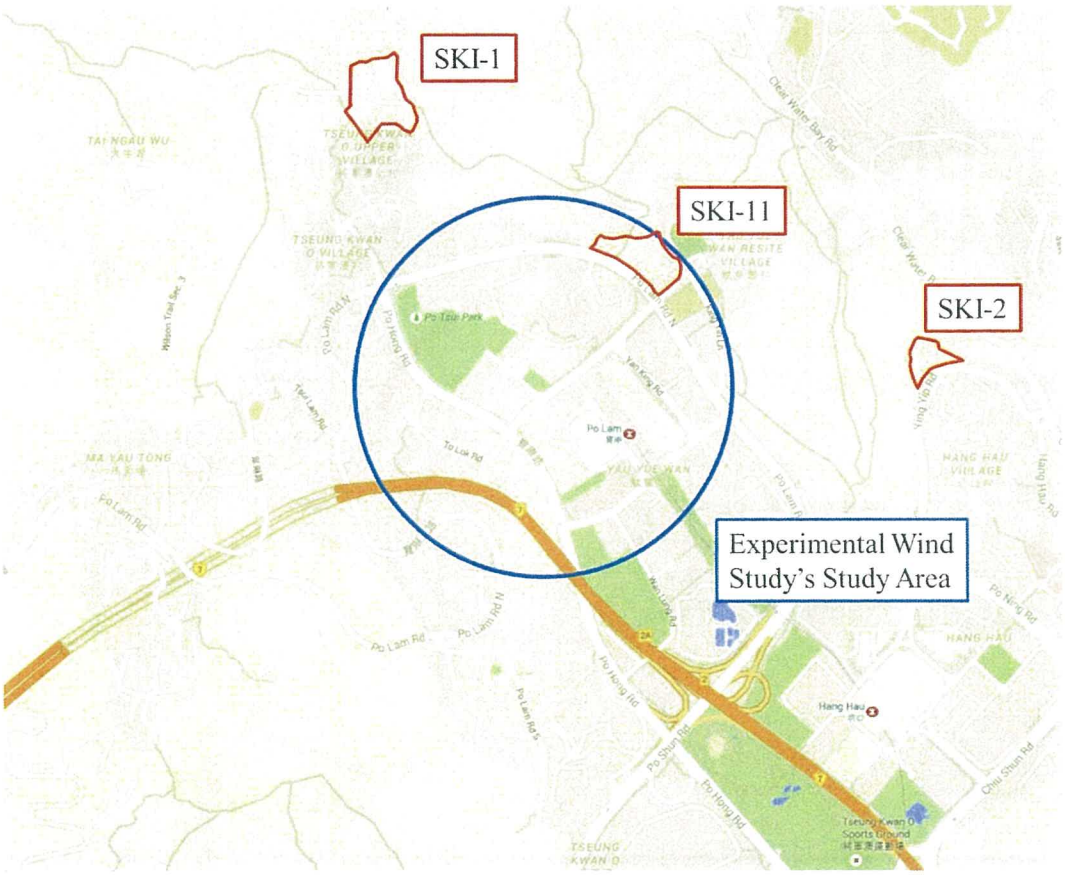


Figure 11 Potential Housing Sites in relation to Experimental Wind Study's Study Area

6.3 Simulated Wind Availability Data

From the RAMS results it is possible to extract the simulated wind results at different locations throughout Hong Kong. The wind environment at each potential-housing site can then be extracted, where the results for the 500m, 300m, and 200m can be obtained to understand the wind environment at each site. In general, the 200m or 300m wind rose for each site was taken as reference as it is able to represent the non-obstructed wind conditions at each site's. The location of the sites in respect of the RAMS grid is shown in Figure 12.

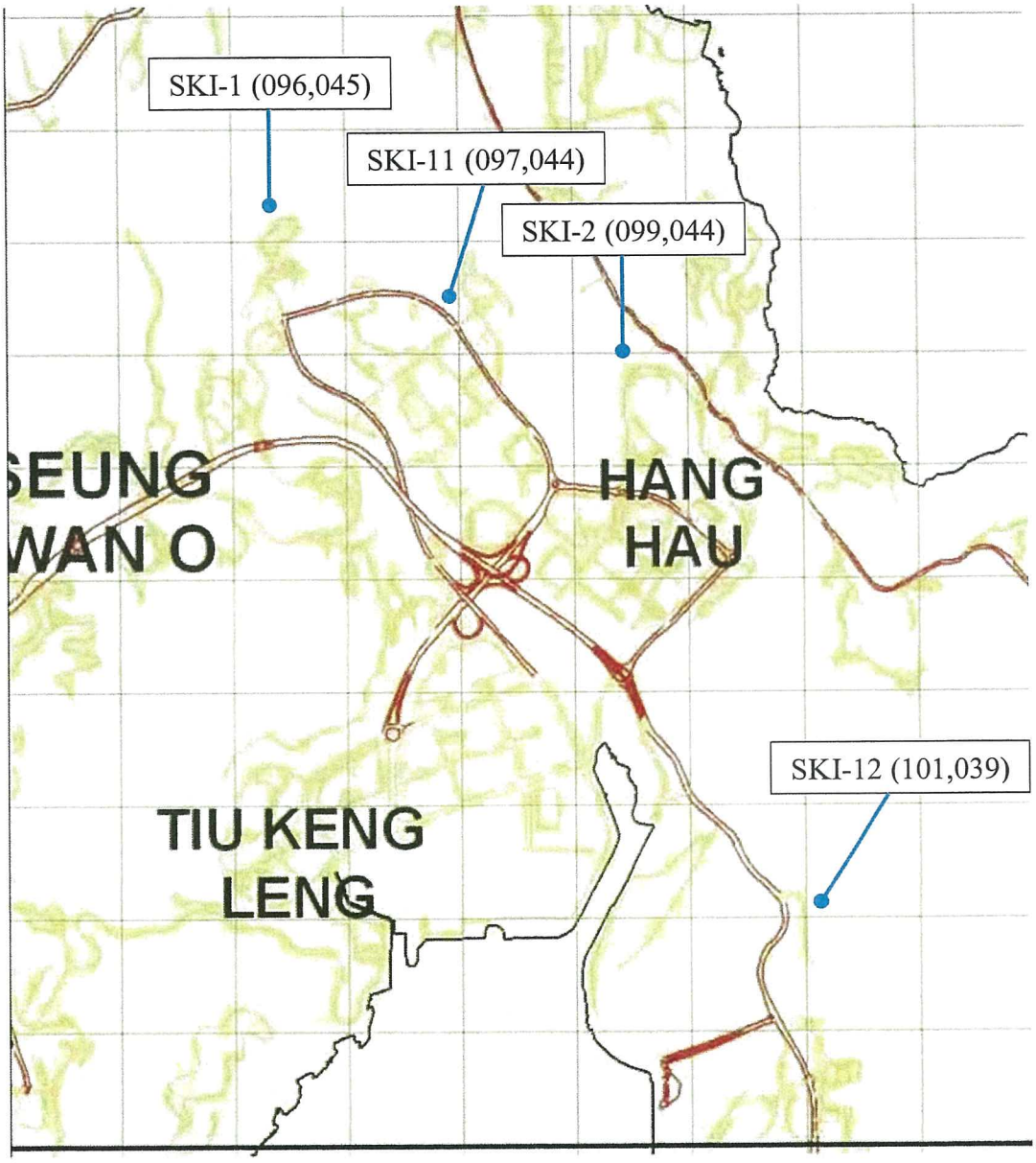


Figure 12 Potential Housing Sites in Relation to RAMS Data Grid

6.4 Summary of Wind Availability for Each Site

Table 2 Summary of Wind Availability for Each Site

Site	HKO	Wind Tunnel Study	RAMS	Consolidated Prevailing Wind
SKI-1	Not referenced	Annual: N/ENE/E Summer: E/S/SW	Annual: NNE/ENE/E Summer: S/SSW/SW	Annual: N/NNE/ENE/E Summer: S/SSW/SW
SKI-2	Not referenced	Not referenced	Annual: NNE/ENE/E Summer: E/S/SSW/SW	Annual: NNE/ENE/E Summer: E/S/SSW/SW
SKI-11	Not referenced	Annual: N/ENE/E Summer: E/S/SW	Annual: NNE/ENE/E Summer: E/S/SSW/SW	Annual: N/NNE/ENE/E Summer: E/S/SSW/SW
SKI-12	Not referenced	Not referenced	Annual: NNE/ENE/E Summer: S/SSW/SW	Annual: NNE/ENE/E Summer: S/SSW/SW

7 Expert Evaluation on the Air Ventilation of SKI-1

7.1 Site Wind Availability at SKI-1

HKO Weather Monitoring Station

The HKO weather monitoring station is located approximately 1.7km south of SKI-1. As discussed in Section 6.1, the measured wind data from the weather monitoring station represents the local wind environment, and is thus not suitable to be considered for the project site SKI-1.

Wind Tunnel Study

SKI-1 is located approximately 400m northwest of the study area used in the *Wind Tunnel Study*, thus the wind availability at SKI-1 should take into account the experimental site wind availability data. Experimental site wind availability data indicated that the annual prevailing wind is N, ENE, and E. The summer prevailing wind is indicated to be E, S, and SW. Refer to Section 6.2 for more details.

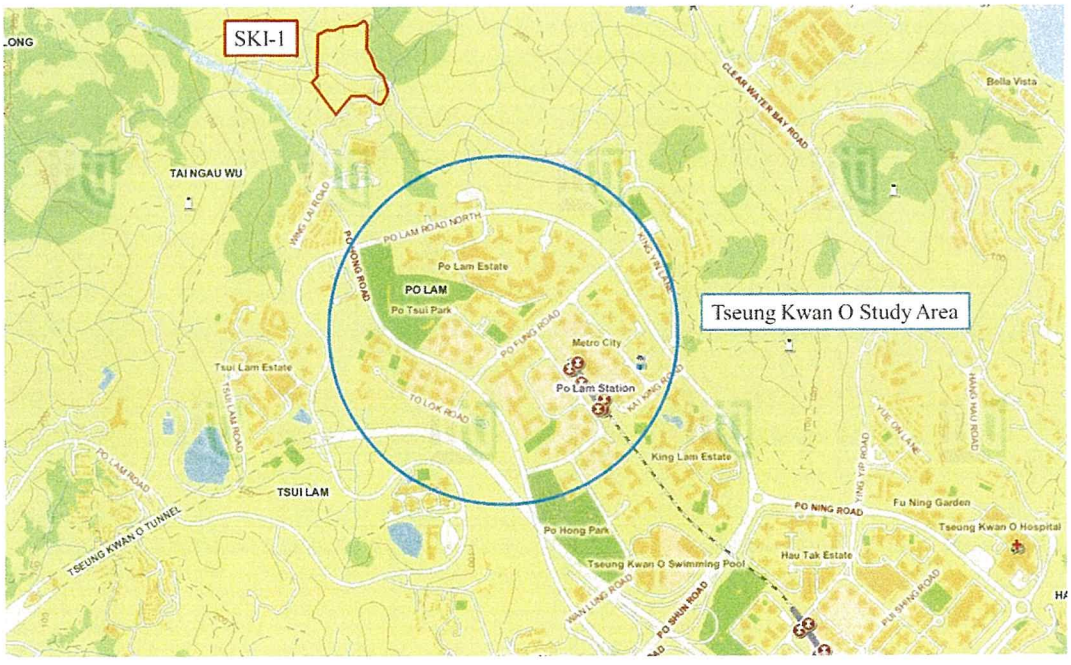


Figure 13 SKI-1 in relation to Experimental Wind Study's Study Area

RAMS

From the RAMS data provided by PlanD, the simulated wind rose at 200m are presented in the figures below.

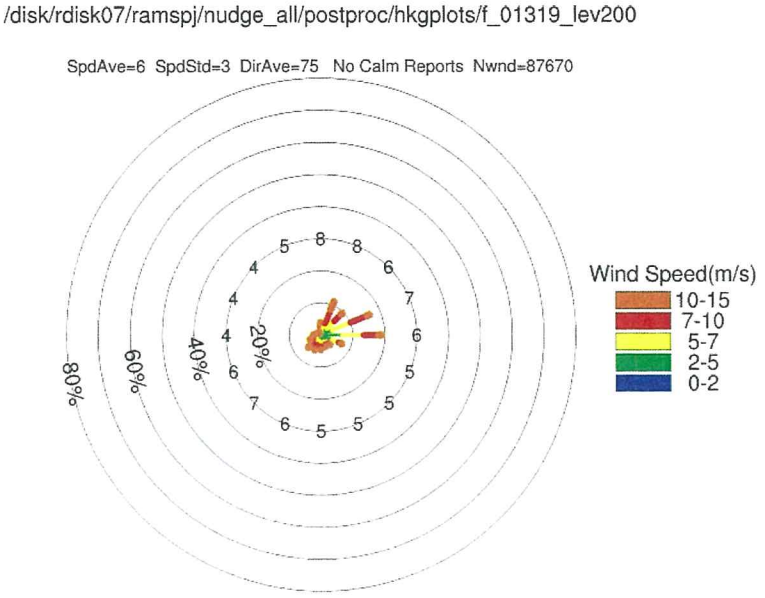


Figure 14 SKI-1 Annual Wind Rose – 200m (096,045)

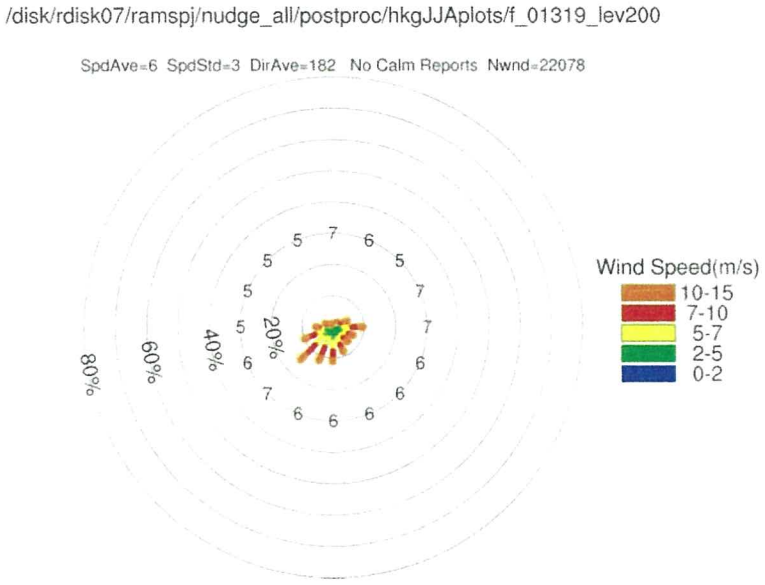


Figure 15 SKI-1 Summer Wind Rose – 200m (096,045)

From the above simulated data, it can be concluded that the NNE, ENE, and E, winds are prevailing under the annual condition. For the summer months, the prevailing wind directions are S, SSW, and SW.

Concluded Site Wind Availability

Through the consideration of the *Wind Tunnel Study* and RAMS data, it is concluded that the prevailing wind condition for annual is N, NNE, ENE and E, and the prevailing wind condition for summer is S, SW, and SSW.

7.2 Characteristics of Project Site and Its Surrounding Area

The project site of SKI-1 is located on a mountain side where the elevation of the project site ranges from 80mPD to the north and 45mPD to the south. The existing condition of the project site is that of open ground.

Directly to the south of the project site is Tseung Kwan O Upper Village. Further to the south is open ground which stretches to Po Tsui Park. Slightly to the southwest is the low-rise cluster of Tseung Kwan O Village. To the southeast of the project site and further towards the south of Po Tsui Park are high-rise residential developments of Po Lam, which includes Po Lam Estate, Ying Ming Court, and Well On Garden.

The site is surrounded by mountains to the east, north and west. Razor Hill, with a height of over 432mPD, is located to the north of the site. The high grounds of Tai Ngau Wu, with an elevation of approximately 150mPD is located to the west.

The surrounding developments are indicated in Figure 16.

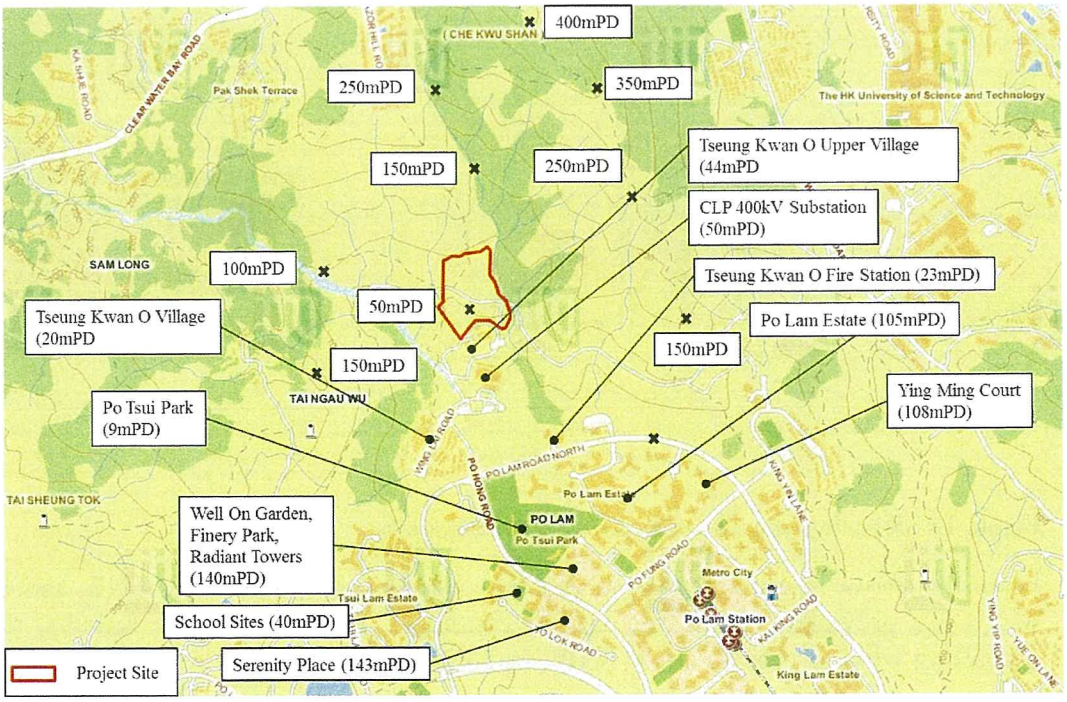


Figure 16 Vicinity Map of SKI-1

7.3 Qualitative Assessment of the Existing Wind Condition – SKI-1

With the consideration of the surrounding developments and topology at and around the project site, the wind environments under annual condition are dominated by N, NNE, ENE, and E wind while the summer condition are dominated by S, SW, and SSW winds. In coming sections, the wind performance under N/NNE, ENE/E, and S/SW/SSW are qualitatively assessed based on the wind data presented in Section 7.1.

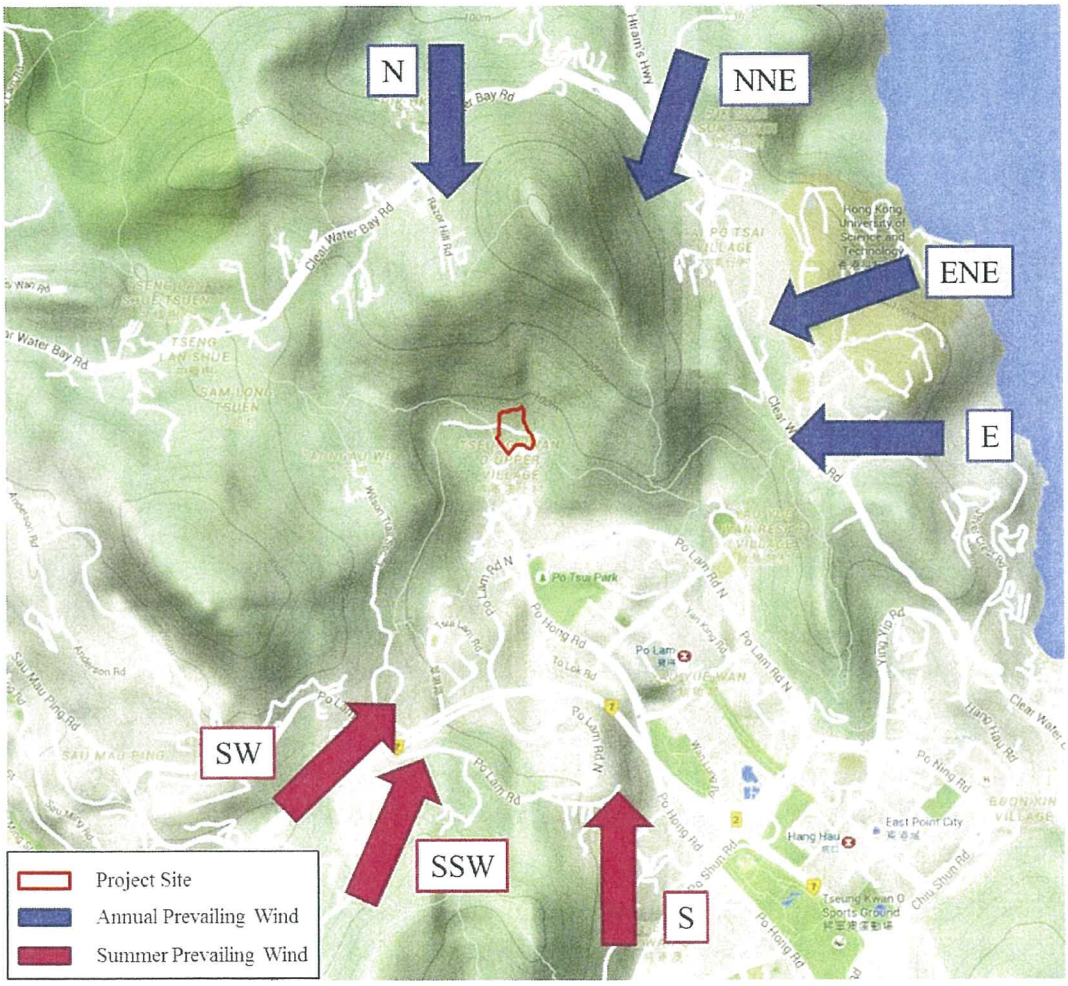


Figure 17 SKI-1 Prevailing Wind Environment

7.3.1 Under N/NNE Wind Direction

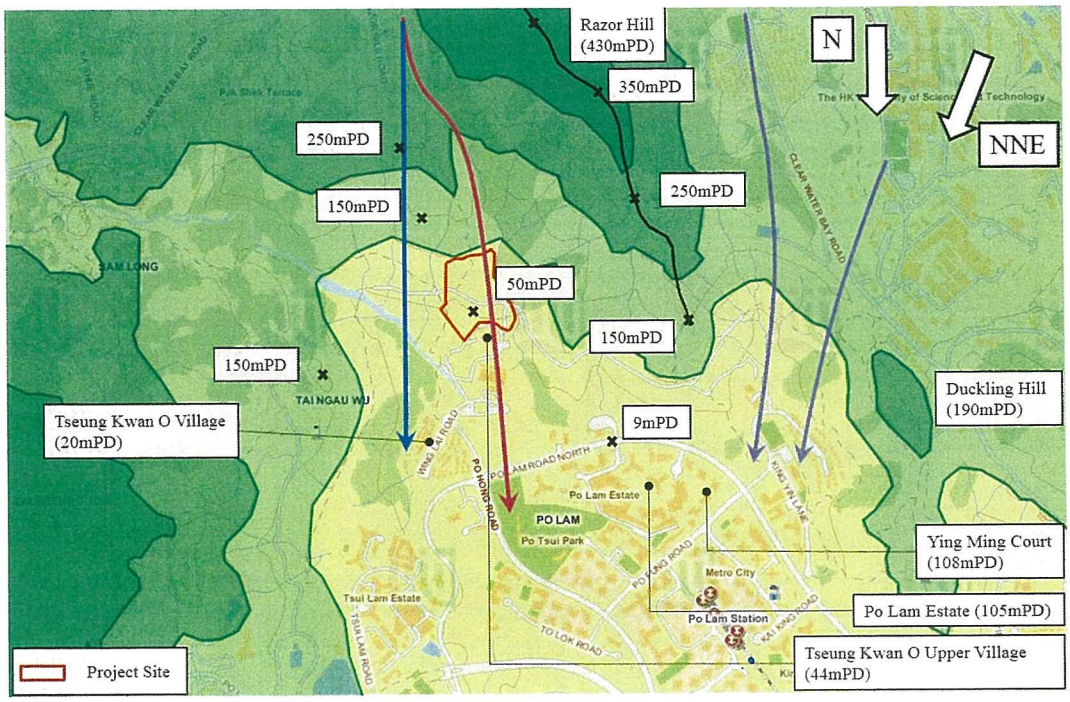


Figure 18 Existing SKI-1 N Prevailing Wind Condition

Under the annual prevailing N/NNE wind, the tall mountainous terrain to the north of Po Lam would cast wind shadow over Po Lam, resulting in relatively lower wind speeds.

A gully runs to the north of the proposed project site, which may be responsible as a wind path bringing wind flowing over the mountain down into the lower elevations. The mountain breeze (pink arrow) will flow through the project site and ventilate the low village houses of both Tseung Kwan O Upper Village and Tseung Kwan O Village. Wind will continue flowing down the mountain to ventilate the built-up area of Po Lam.

Wind flowing down from the higher elevations to the west of the project site is expected to ventilate Tseung Kwan O Village (dark blue arrow)

To the east of the proposed project site is the tall mountain ridge stretching down from Razor Hill. Further to the southeast of the ridge is Duckling Hill, which forms a small valley with Razor Hill. The majority of the wind would likely flow between the two mountains and into the valley to ventilate the eastern portion of Po Lam region (purple arrow). Higher level winds that can flow over the ridge may be downwashed by the high-rise developments of Po Lam Estate and Ying Ming Court. As no major wind path is aligned with the N/NNE-wind at Po Lam, it is expected the core part of Po Lam will experience calmer wind environments.

7.3.2 Under ENE/E wind direction

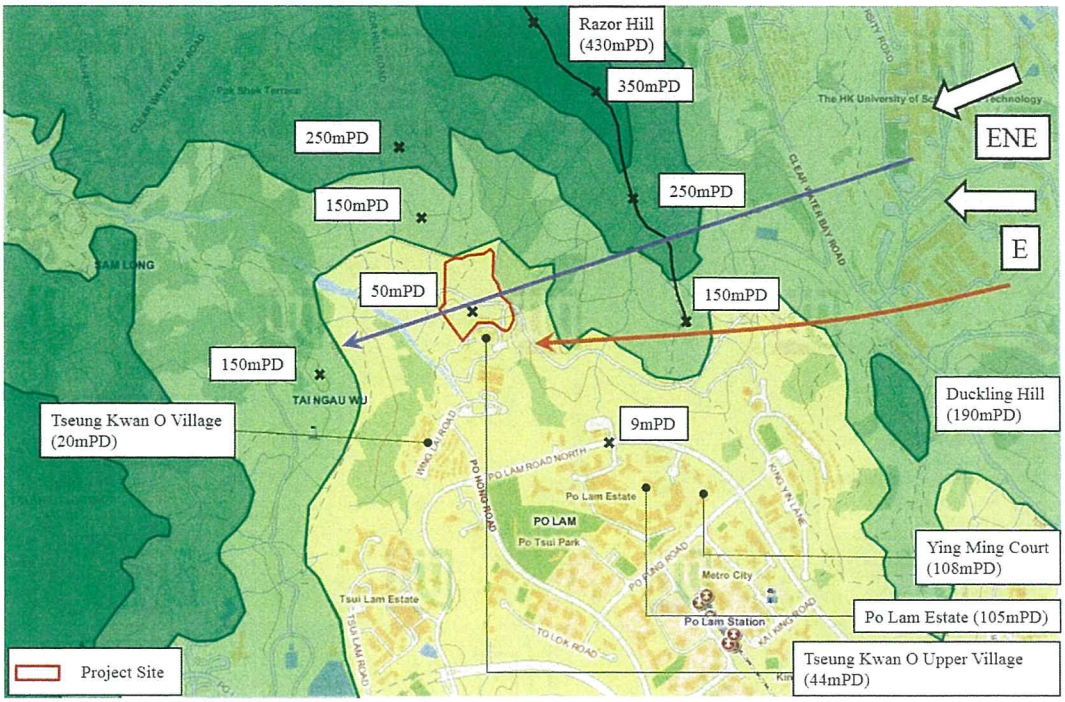


Figure 19 Existing SKI-1 ENE and E Prevailing Wind Condition

Razor Hill and Duckling Hill will have a large impact to the annual prevailing wind condition of ENE and E winds.

Duckling Hill will cast a wind shadow over Po Lam, and it is expected that Po Lam in general will experience a calmer wind environment.

Wind flowing to the north of Duckling Hill will flow towards Razor Hill, in which the mountain will cast a large wind shadow to the west, which will encompass the existing open ground at the project site and Tseung Kwan O Upper Village. Wind may possibly flow around the southern end of Razor Hill (orange arrow) and possibly ventilate Tseung Kwan O Upper Village and the southern portion of the project site. High level wind flowing over Razor Hill (purple arrow) will most likely flow over the project site and Tseung Kwan O Upper Village. Both the project site and Tseung Kwan O Upper Village is expected to experience calm wind environment under the prevailing winds of E and ENE.

7.3.3 Under S/SSW/SW wind direction

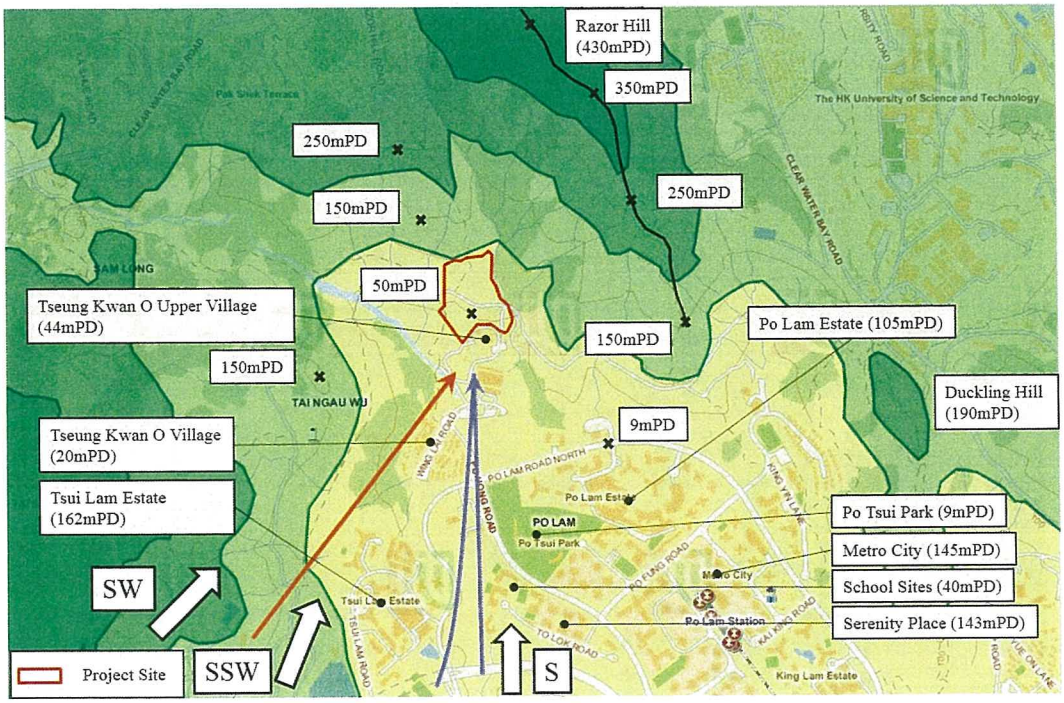


Figure 20 Existing SKI-1 S Prevailing Wind Condition

The built environment of Po Lam is quite congested, where it is populated with high-rise building clusters including Po Lam Estate, Metro City, Serenity Place, and etc. These high-rise clusters are mostly located to the south-east of the project site.

Incoming SW and SSW wind will enter Po Lam through the low ridge area around Ma Yau Tong, between Tai Sheung Tok and Mau Wu Shan. S wind will be winds rolling down from Mau Wu Shan to ventilate the western areas of Po Lam. As the distance between Mau Wu Shan and the project site is relatively far, the wind environment at the project site and Tseung Kwan O Upper Village is expected to be favourable as wind is able reattach to the ground and flow between Tsui Lam Estate and Serenity Place to ventilate the area (purple arrow).

The open space between the high ground of Tai Ngau Wu and Tsui Lam Estate is expected to act as a wind entrance for SW wind to flow towards the project site, through Tseung Kwan O Village (orange arrow).

It is expected that the project site and the vicinity area will receive favourable wind conditions.

7.4 Evaluation of Conceptual Layout Characteristics

The conceptual layout of SKI-1 consists of four Y-form domestic blocks with a proposed height limit of 180mPD. The road serving the project site runs through the middle of the site, separating it into two sides. Due to topographic constraints, the site level follows the terrain contour of the mountainside closely, where the northern side have a levelling of 60mPD and the southern side have a levelling of 43mPD and 38mPD.

On the northern side of the site is a non-domestic podium and on the southern side of the site is a non-domestic block. Both the podium and block's roof height follows the site level height, where the northern non-domestic podium and site levelling is of 60mPD and the southern non-domestic block and site levelling is of 43mPD.

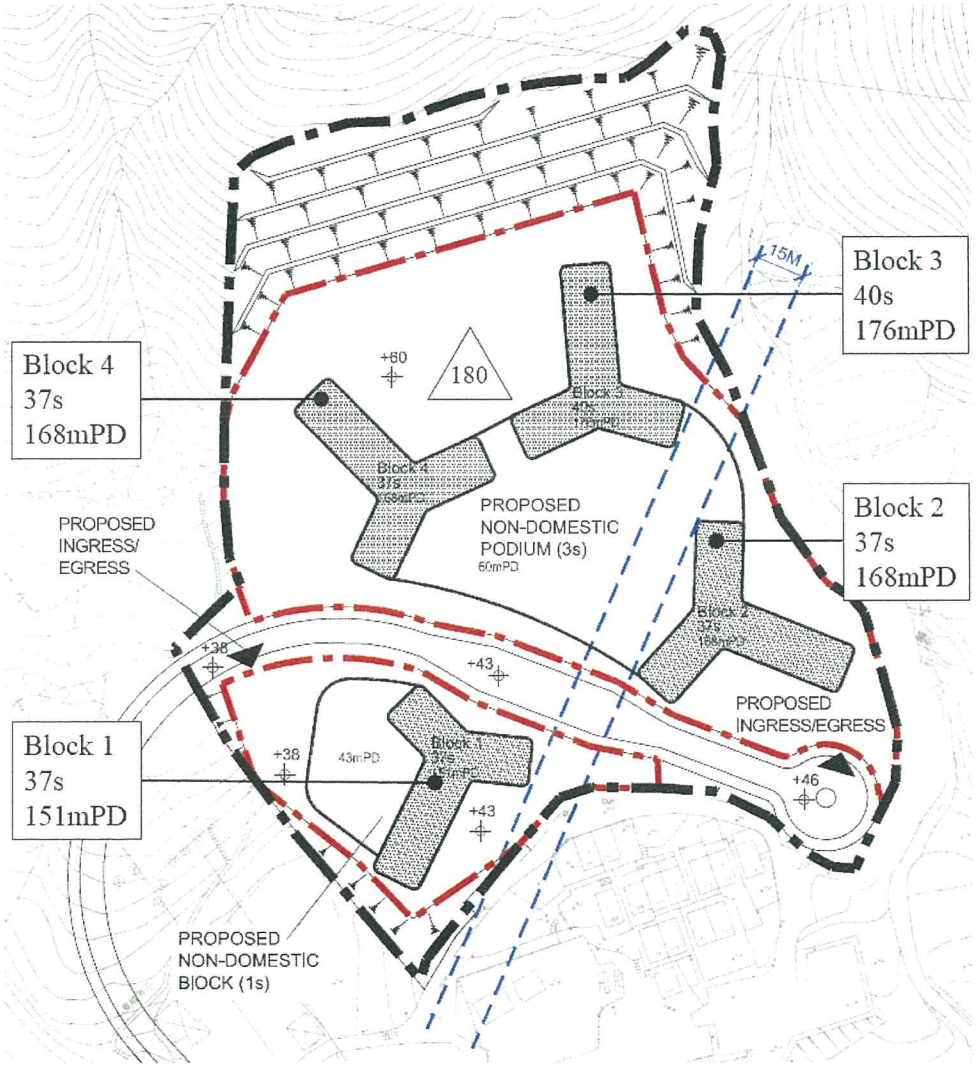


Figure 21 Conceptual Layout of SKI-1

A 15m building separation for high-rise domestic blocks aligned NNE-SSW runs through the site from between Block 2 and Block 3 to between Block 2 and Block 1.

7.4.1 Under N/NNE Wind Direction

N and NNE annual prevailing wind will likely flow down to the project site along a gully to the north of the site. The project site is expected to cast a wind shadow over Tseung Kwan O Upper Village.

Wind flowing down the gully (orange arrow) will be directed around Block 2 to flow within the site (pink arrow) or around the site (blue arrow). This results in a wind shadow casted by Block 2 over the eastern portion of Tseung Kwan O Upper Village.

In the conceptual layout, a 15m wide building separation (dark blue dotted line in Figure 24) aligned to the incoming wind and opening towards Tseung Kwan O Upper Village is implemented to allow prevailing wind to penetrate the site. The southern site formation level is the same level as the ground level of Tseung Kwan O Upper Village. Wind flowing through the building separation and over the northern site will ventilate down into the western portion of Tseung Kwan O Upper Village, reducing the effect of wind shadow caused by the domestic blocks. In addition, as the northern site non-domestic podium's roof height is at the same level as the site level, it will reduce the building mass exposed to the surrounding. Wind flowing down the mountainside is expected to follow the site levelling and similarly over the non-domestic podium to ventilate downstream area of Tseung Kwan O Upper Village, this is illustrated in Figure 22. Thus, the non-domestic podium is not expected to further add significant impact to the surrounding's ventilation performance.

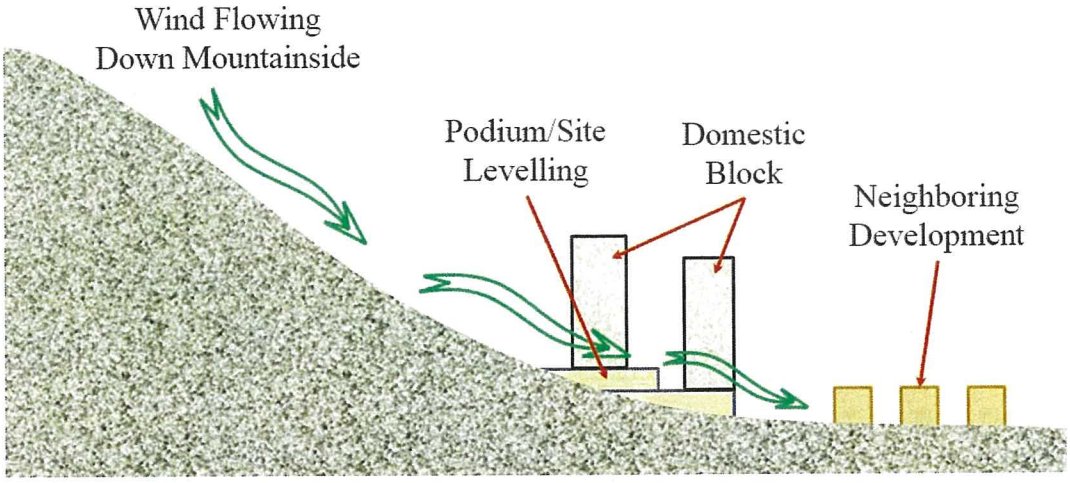


Figure 22 Illustration of Conceptual Layout Cross-section Showing the Podium and Site Levelling under N/NNE wind (Not to scale)

Wind flowing down from the higher elevations around the west of the project site is expected to ventilate Tseung Kwan O Village (dark blue arrow).

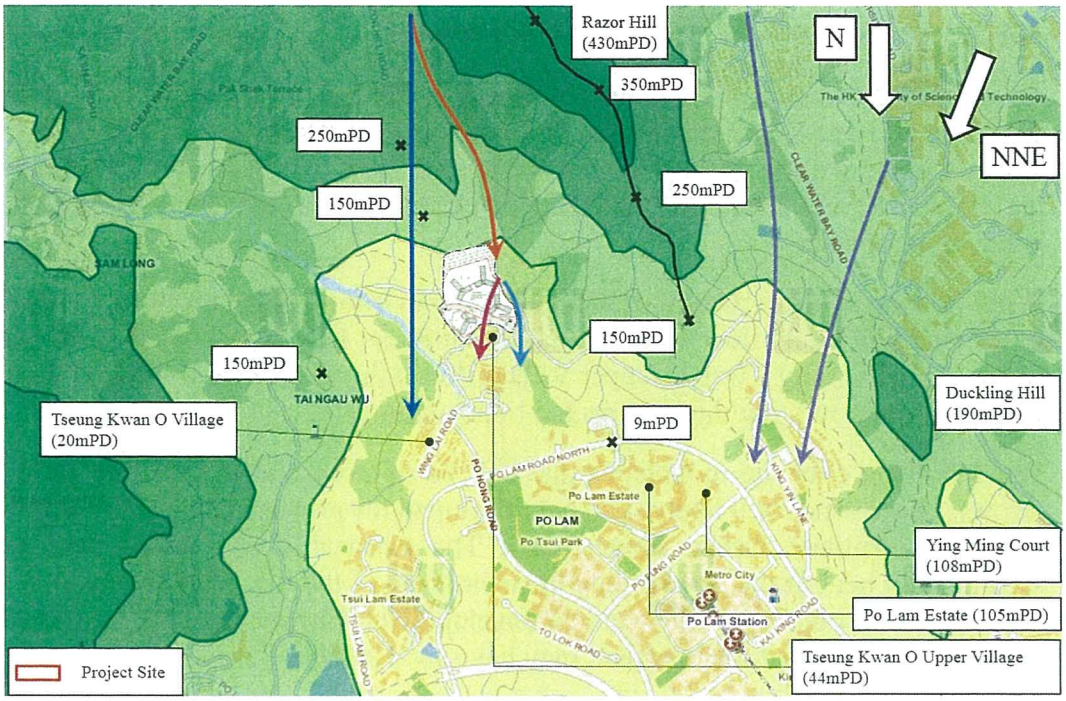


Figure 23 Future Wind Condition under N/NNE Wind around SKI-1

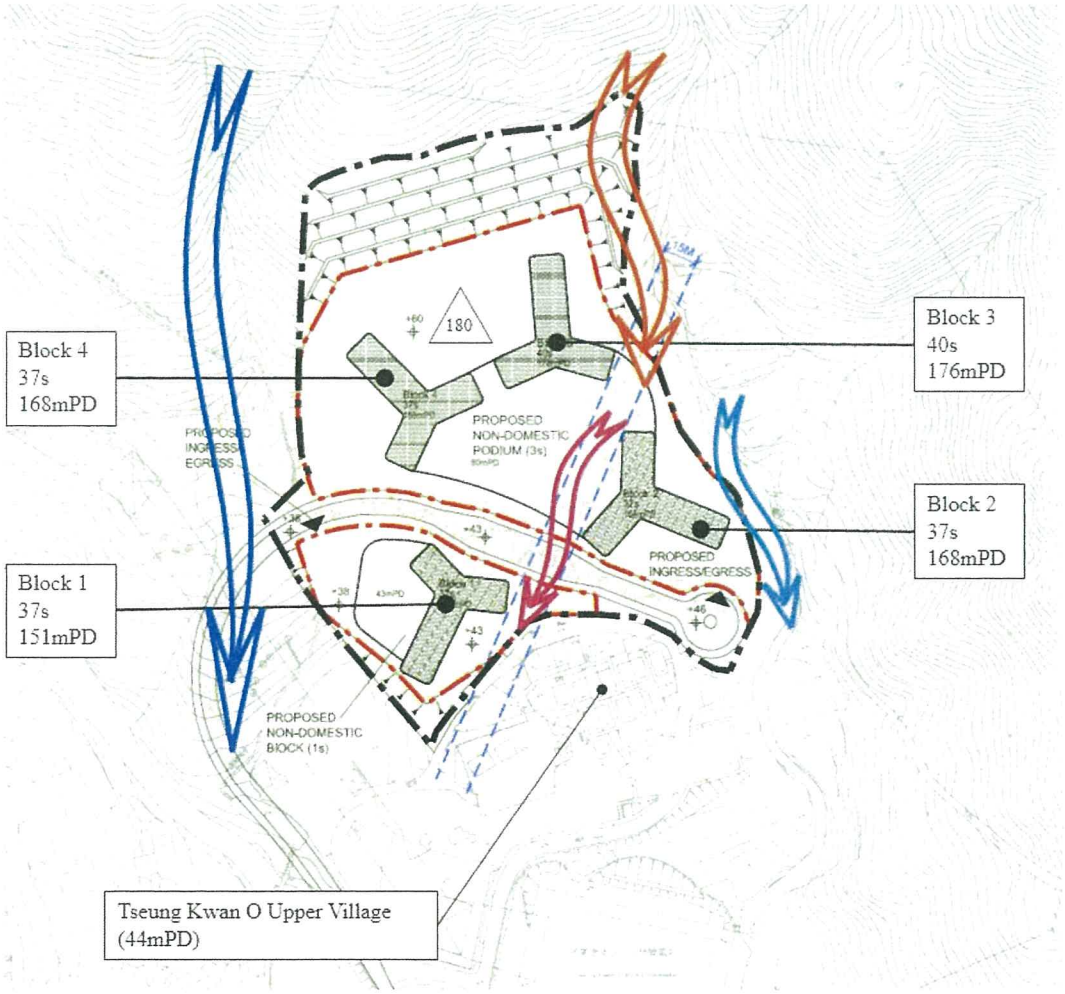


Figure 24 SKI-1 Building Separation and Air Flow for N/NNE Wind

7.4.2 Under ENE/E Wind Direction

As discussed in Section 7.3.2, the incoming wind will be affected by both the Duckling Hill and Razor Hill, where Po Lam, the project site, and Tseung Kwan O Upper Village will be under the wind shadow of these two mountains. Therefore, the project site and Tseung Kwan O Upper Village is expected to experience calm wind environments.

Wind flowing to the north of the Duckling Hill will be of higher elevation. The high level wind will likely flow around the south of Razor Hill. Some of the wind may flow towards Tseung Kwan O Upper Village due to the wake zone created by Razor Hill (orange arrow), but this is expected to be minimal.

Wind flowing over the mountain ridge will be of even higher elevation (purple arrow). These winds will likely skim over the top of the proposed high-rise domestic blocks to ventilate further downstream. The permeable site design will not significantly benefit the surrounding areas because of the low wind availability at lower levels. Furthermore, there are no developments downwind of the project site in which the proposed development may have an effect on.

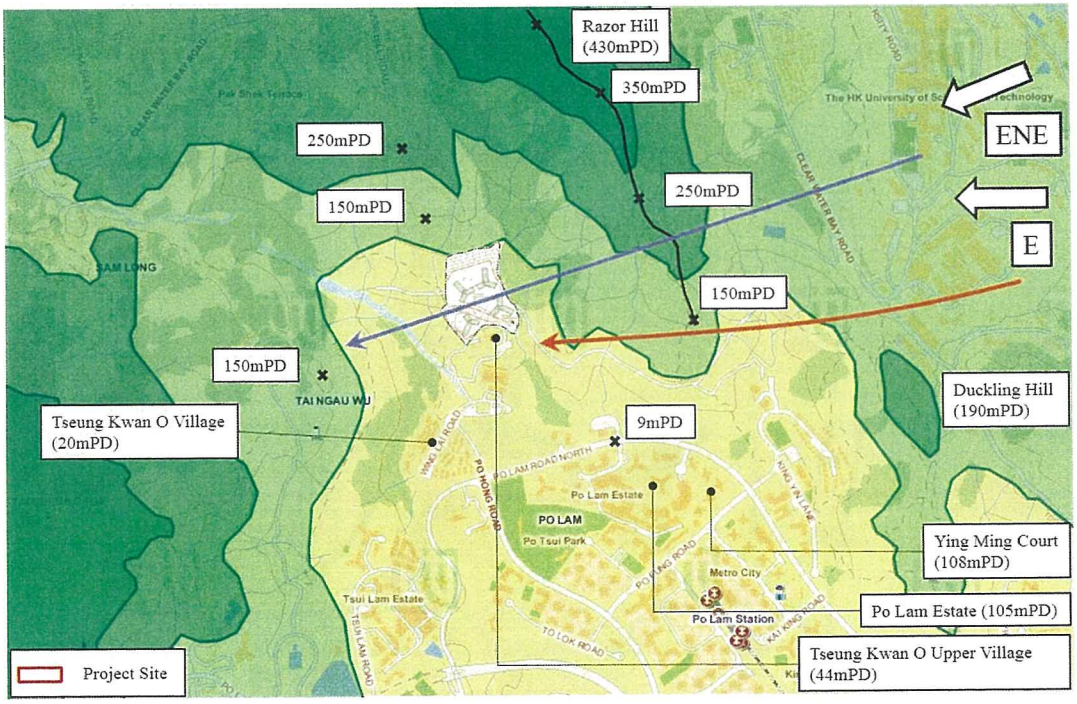


Figure 25 Future Wind Condition under ENE/E Wind around SKI-1

7.4.3 Under S, SSW, and SW Wind Direction

Under the summer conditions of S, SSW, and SW condition, the incoming wind will flow through and around the built up area of Po Lam. Incoming wind will most likely flow through the open area between Tsui Lam Estate and Serenity Place (purple arrow) along with the open area between Tsui Lam Estate and the mountain Tai Sheung Tok (orange arrow). The proposed development at SKI-3 will reduce the open ground between Tsui Lam Estate and Tai Sheung Tok, in which wind can flow through, possibly impacting on the wind availability of SKI-1 under SW and SSW wind. However, there is still a pathway between SKI-3 and Tai Sheung Tok allowing wind to ventilate SKI-1, in addition the distance between the two proposed sites is relatively far, allowing for wind to recover and ventilate SKI-1.

The two identified wind entrances to the south and southwest of SKI-1 will result in favourable wind conditions in summer. The project site's design, with a 15m building separation aligned with SSW-NNE direction (dark blue dotted line in Figure 27) will facilitate wind penetration under summer winds (pink arrow).

However, as there are no developments at downwind area, the project site will have no significant impact to the surrounding areas.

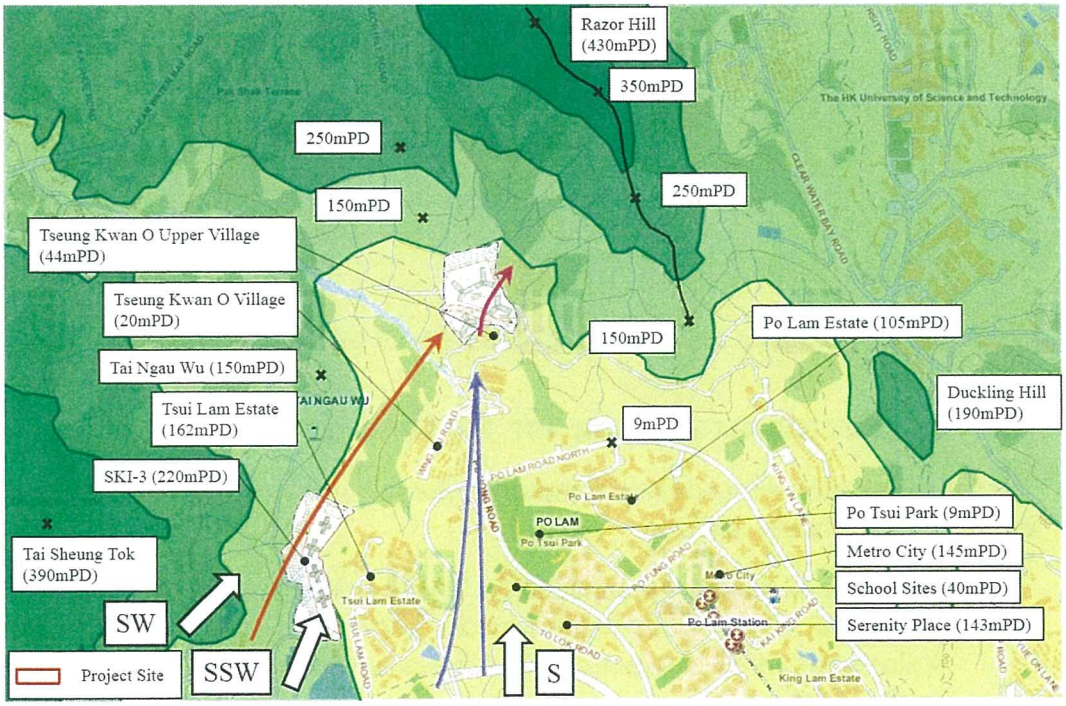


Figure 26 Future Wind Condition under S/SSW/SW Wind around SKI-1

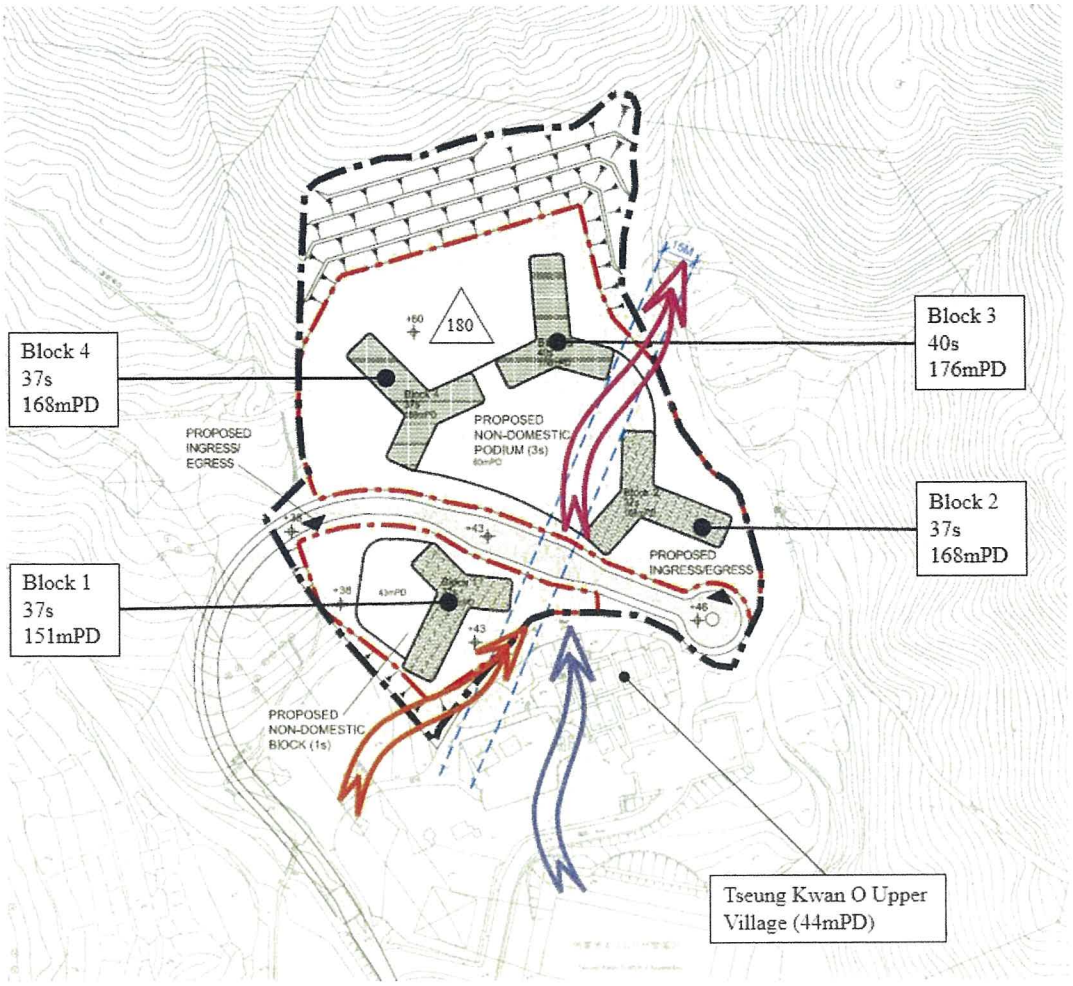


Figure 27 SKI-1 Building Separation and Wind Flow for S/SSW/SW Winds

7.5 Recommendation for further study

The following wind enhancement features for the project site is recommended to be implemented in future designs:

- A 15m wide building separation for high-rise domestic blocks aligning in SSW/NNE direction as wind corridor towards Tseung Kwan O Upper Village should be incorporated in alleviating the potential adverse impact on the village.
- Further enhancement features at Block 2's pedestrian level should be considered at the next stage of the Project to enhance the pedestrian level permeability around Block 2 to allow for N/NNE wind to ventilate Tseung Kwan O Upper Village.

Quantitative AVA should be carried out at the next stage of the Project to demonstrate that the wind performance of the future scheme is no worse off than the current conceptual layout and for scheme design optimization.

8 Expert Evaluation on the Air Ventilation of SKI-2

8.1 Site Wind Availability at SKI-2

RAMS

The available wind data for SKI-2 is solely the RAMS data provided by PlanD as it is not within the vicinity of the study area of the *Wind Tunnel Study* nor in the vicinity of the HKO weather monitoring station.

From the RAMS data provided by PlanD, the simulated wind rose of the area at 200m are presented below:

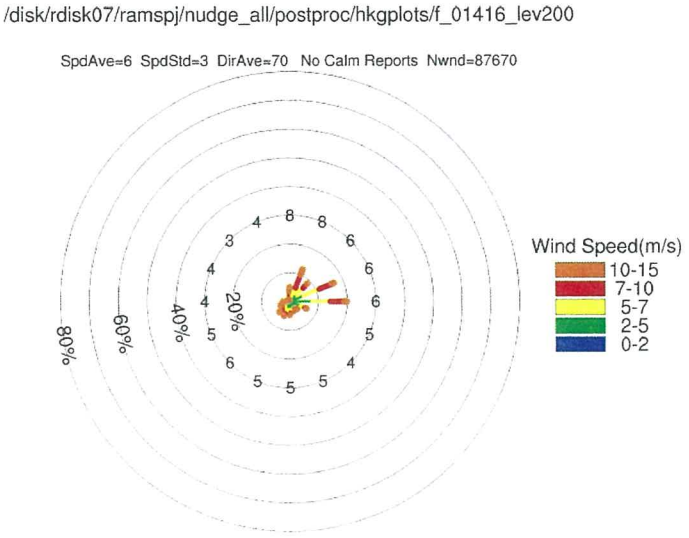


Figure 28 SKI-2 Annual Wind Rose – 200m (099,044)

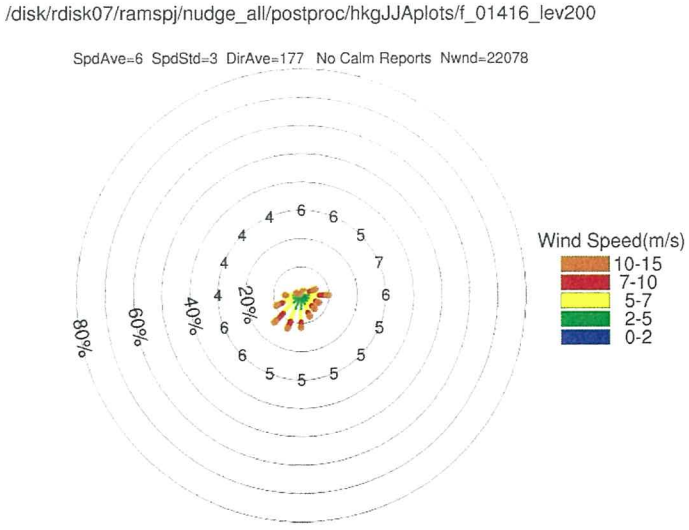


Figure 29 SKI-2 Summer Wind Rose – 200m (099,044)

Concluded Site Wind Availability

From the RAMS wind rose, it can be concluded that the annual wind conditions are mainly NNE, ENE, and E. While in the summer the prevailing wind conditions are E, S, SSW, and SW.

8.2 Characteristics of Project Site and Its Surrounding Area

SKI-2 is located in Hang Hau, situated to the north of Clear Water Bay Film Studio. The development is located in a valley which runs north to south and the elevation drops from north to south. The mountain ridge to the east of the site rises drops from 160mPD to 90mPD and the mountain ridge to the west, which includes Duckling Hill, drops from 150mPD to 100mPD.

To the south of the proposed Project Site is the low-rise clusters consisting of Clear Water Bay Film Studio, Hang Hau Village, Shui Bin Village, Junk Bay Villa, and various school sites. Further to the south is the high-rise residential developments of Hang Hau, which includes Fu Ning Garden and Yu Ming Court.

To the east of the site across the mountain ridge are numerous low-rise villa developments, including Silverstrand Garden, Villa Sandoz, Casabella, Dragon Lake Villa, and Fullway Garden. Slightly to the southeast of the site is a low ridge area (green dotted line), which connects with the sea at Silverstrand Beach.

To the west of Duckling Hill is the town centre of Po Lam.

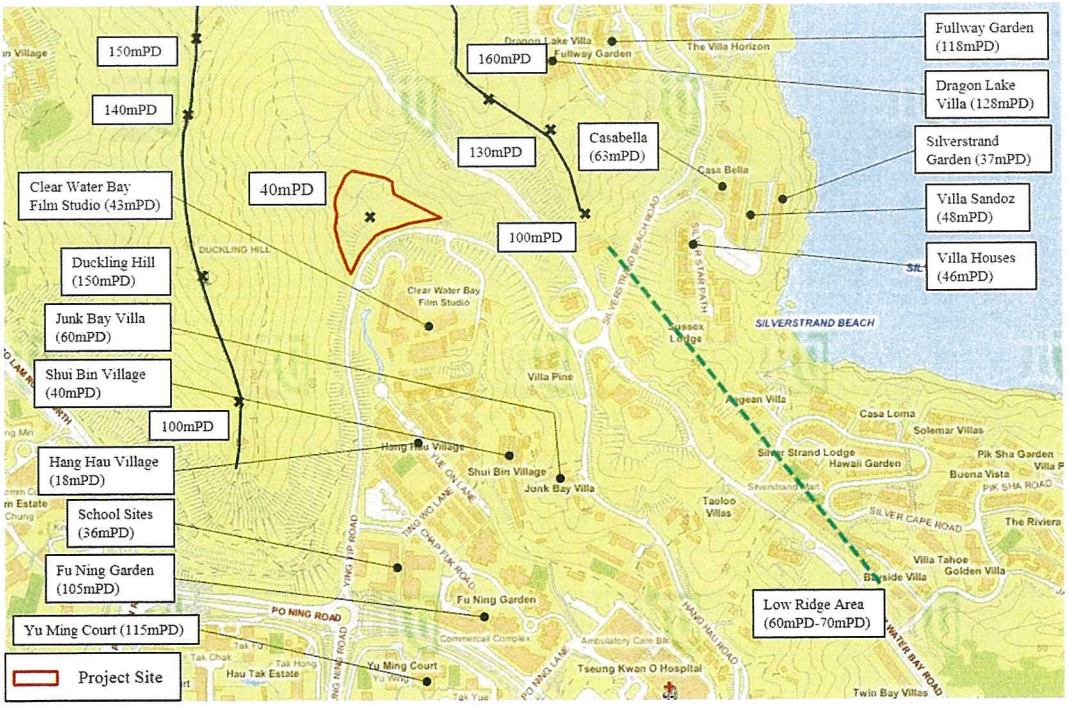


Figure 30 Vicinity Map of SKI-2

8.3 Qualitative Assessment of the Wind Condition – SKI-2

With the consideration of surrounding developments and topology at and around the project site, the wind environments under annual condition are dominated by NNE, ENE, and E wind while the summer condition are dominated by E, S, SSW, and SW winds. The aforementioned wind conditions will be discussed in the following sections. . In coming sections, the wind performance under NNE, ENE/E, S, and SW/SSW are qualitatively assessed based on the wind data.

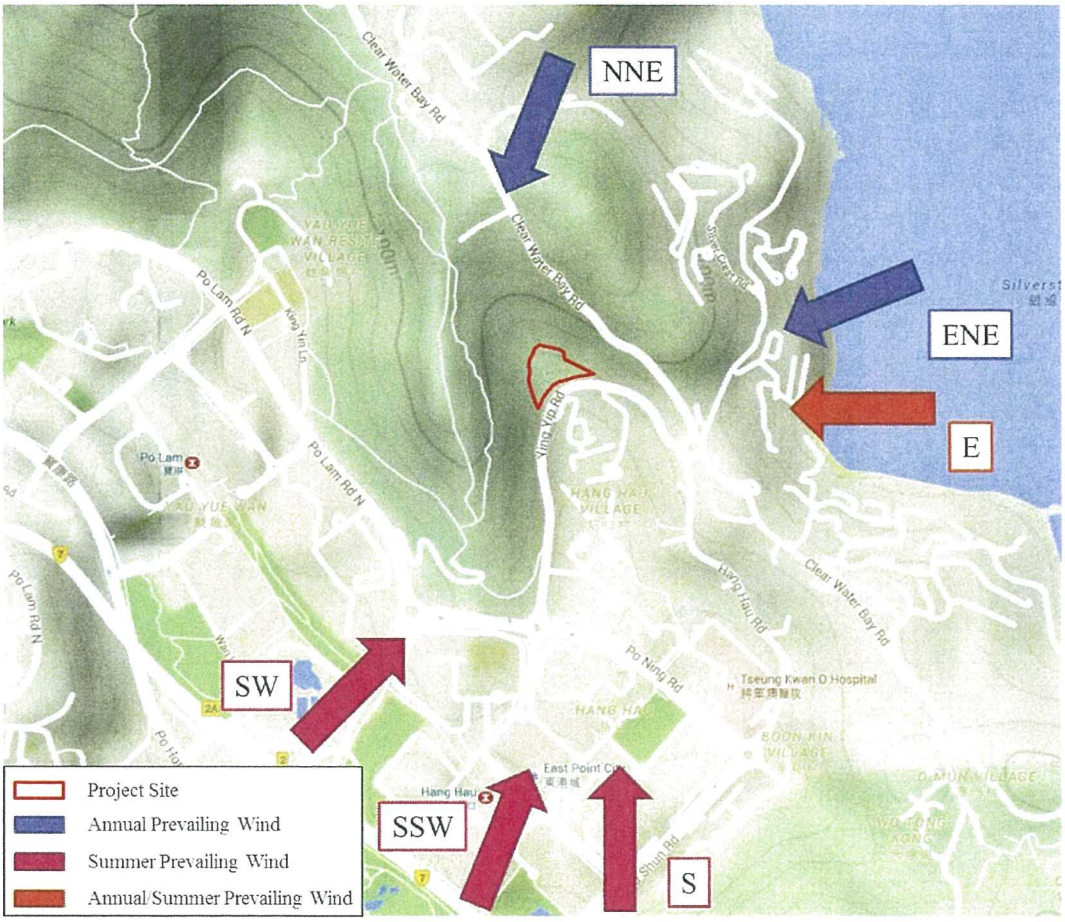


Figure 31 SKI-2 Prevailing Wind Environment

8.3.1 Under NNE Wind direction

Under the annual prevailing wind condition of NNE wind, the incoming wind to the proposed project site is expected to flow over the mountain ridge and down into the valley (purple arrows). The valley will likely channel the wind southwards more. There may also be circulation wind coming back down from the western mountain ridge (blue arrows).

Clear Water Bay Film Studio is expected to experience slightly calmer wind environments due being in the wind shadow of the mountain. The project site, similarly, is expected to experience calmer wind environment but may benefit from circulation winds.

The low ridge area near Silverstrand will be the major wind entrance for Hang Hau area. Incoming wind (orange arrows) will ventilate the low-rise clusters next to Silverstrand as well as those in the northern area of Hang Hau, including Hang Hau Village, Shui Bin Village, and Junk Bay Village. The built-up high-rise area of Hang Hau is thus expected to experience good wind availability.

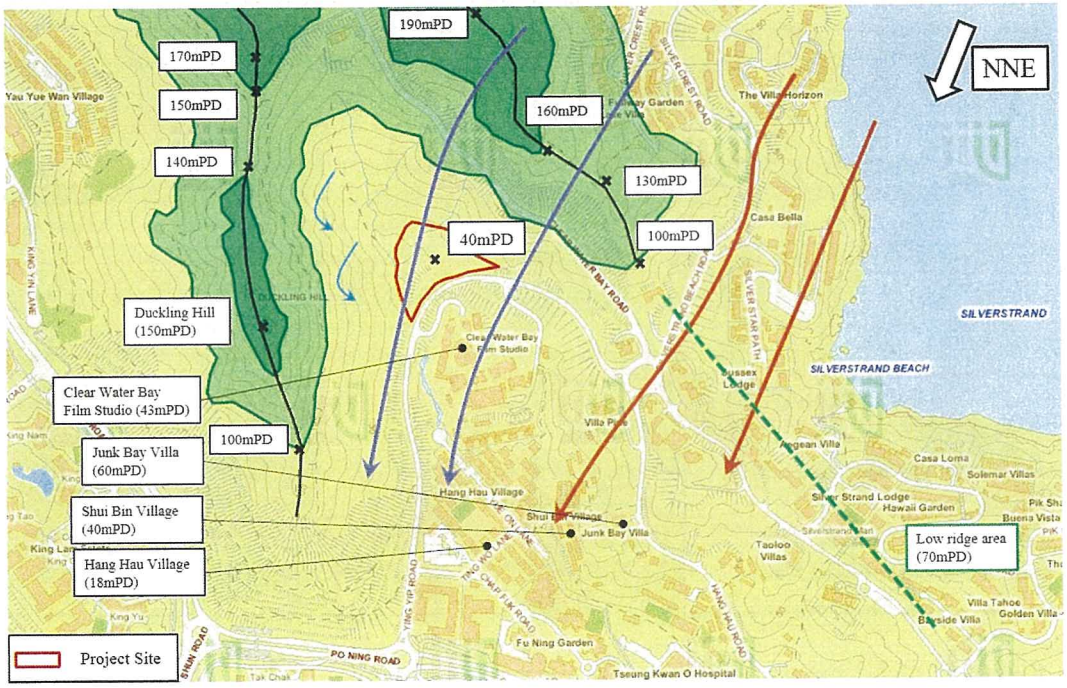


Figure 32 Existing SKI-2 NNE Prevailing Wind Condition

8.3.2 Under ENE/E Wind Direction

The low ridge area near Silverstrand will be the main wind entrance for the annual prevailing wind conditions of ENE and E wind directions. The incoming wind will ventilate the low-rise clusters around Silverstrand Beach as well as those at northern Hang Hau region, including Clear Water Bay Film Studio, Hang Hau Village, and Shui Bin Village (purple arrow).

Wind flowing over the mountain ridge will likely flow over the valley itself and ventilate westwards over Duckling Hill to ventilate Po Lam region (orange arrow). The project site is expected to experience calm wind environment as it is located in a valley. The project site may receive wind from circulation wind (blue arrow) or possibly wind flowing around the mountain (pink arrow).

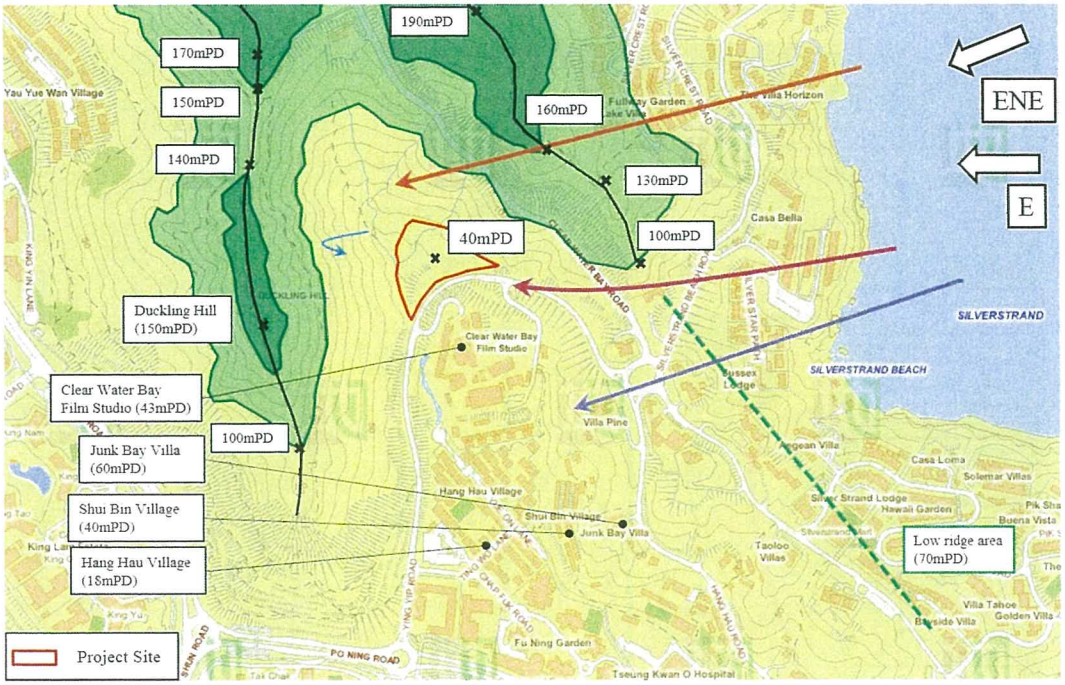


Figure 33 Existing SKI-2 ENE/E Prevailing Wind Condition

8.3.3 Under S Wind Direction

The built environment of Hang Hau is densely populated with high-rise developments including Hau Tak Estate, Yu Ming Court, and Fu Ning Garden. There are no major wind paths aligned with the incoming wind, thus it is expected that the low-rise clusters to the north of Po Ning Road, including Hang Hau Village and Shui Bin Village, will experience relatively calm wind environments.

Wind flowing over the built-up area of Hang Hau will gradually reattach to the ground (blue arrows). As the project site is located at an elevation of 40mPD and the building height at Hang Hau is approximately 115mPD, the relatively long distance that the wind has to travel before reaching the project site may allow majority of the wind to reattach to the ground. The wind environment at and near the project site is expected to be satisfactory.

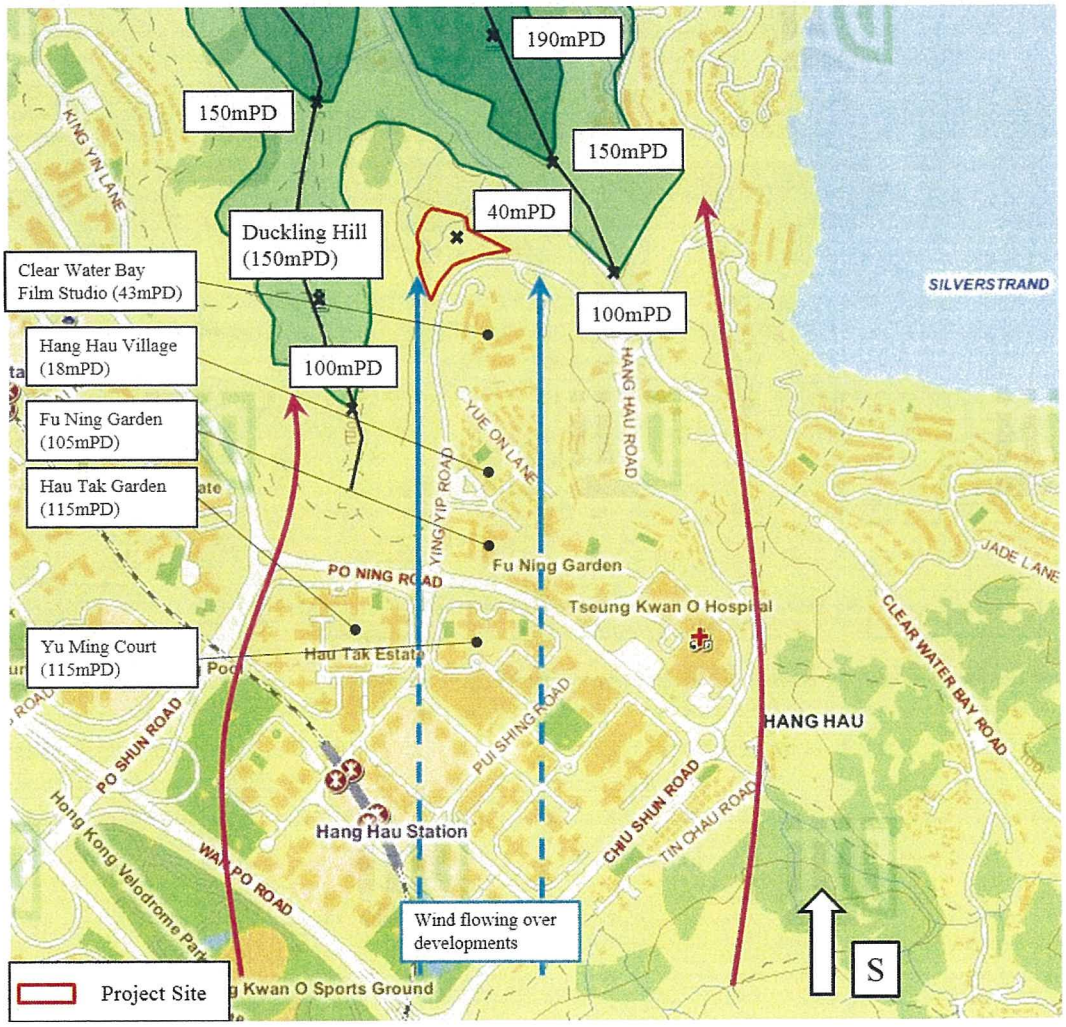


Figure 34 Existing SKI-2 S Wind Condition

8.3.4 Under SSW/SW Wind Direction

The road network of Hang Hau being aligned with the SW-NE direction allows for the summer prevailing SW and SSW winds to penetrate the built-up area of Hang Hau.

Wind is expected to flow along Po Shun Road, Sheung Ning Road, Pui Shing Road, and Chiu Shun Road (orange arrows) to ventilate the downstream environment, which includes the low-rise clusters of Hang Hau Village and the villa houses along Silverstrand.

The project site at SKI-2 is located in a valley, where the mountain ridge to the west may block direct incoming wind. High level winds is expected to mostly flow over the valley (purple arrow). Circulation winds (blue arrows) may flow back down the mountain ridge to ventilate the valley. However, under the existing condition the project site is expected to experience a relatively calm wind environment.

The villas located to the northeast of the potential housing site is on the other side of the eastern mountain ridge. The high level winds which flow over the valley will also flow over the mountain ridge towards the northeast. It is expected that the wind will skim over the top of the villa houses, thus the villa houses will experience calmer wind environments.

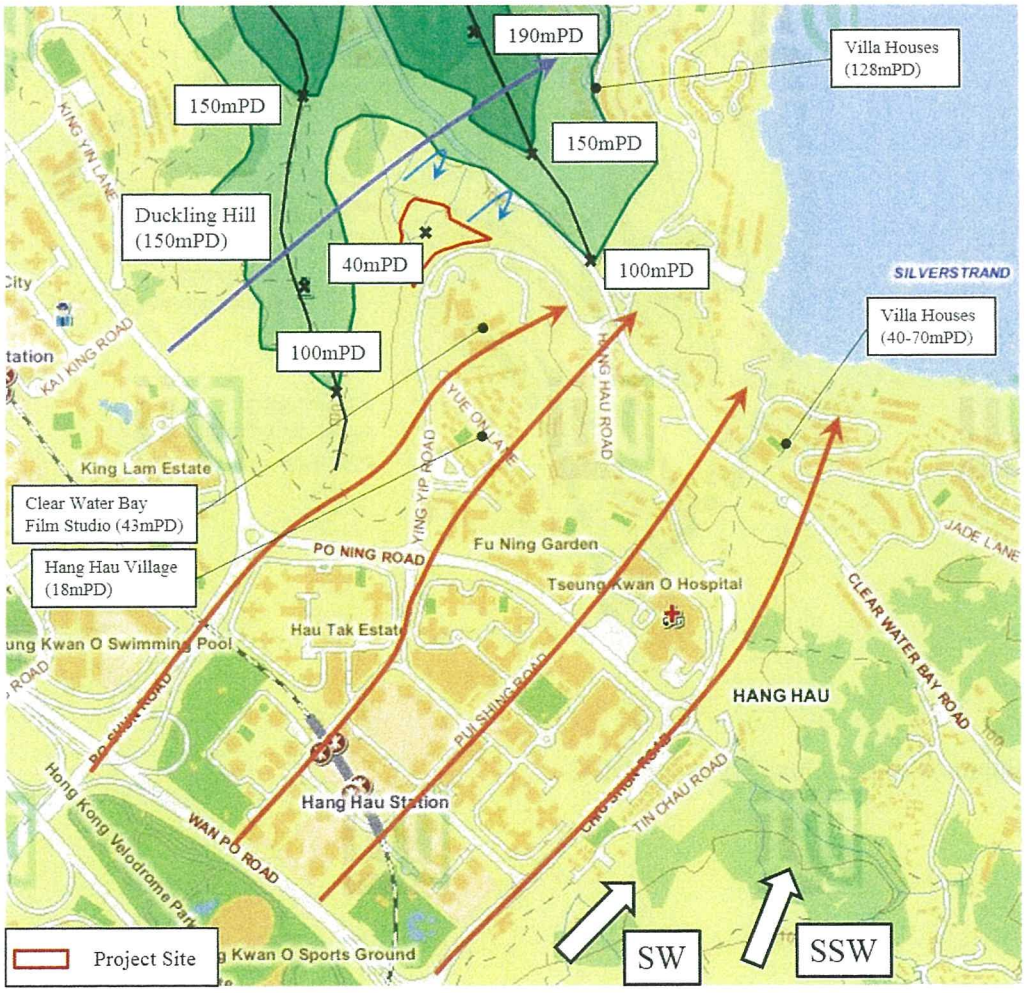


Figure 35 Existing SKI-2 SW Wind Condition

8.4 Evaluation of Conceptual Layout Characteristics

The conceptual layout of SKI-2 consists of two point form blocks, which are aligned in the NNE-SSW direction. The proposed maximum building height limit of SKI-2 is 170mPD. The site formation level is at 44mPD, which is similar in elevation to the surrounding topography. Roof of one storey non-domestic podium is at the same levelling as mountain side site formation level, at 44mPD. The two domestic blocks and the non-domestic block sits on-top of the podium. The non-domestic block, situated to the east of the domestic blocks, is proposed to be 6 storeys and of 74mPD tall. A 15m building separation exists between the non-domestic block and the domestic blocks.

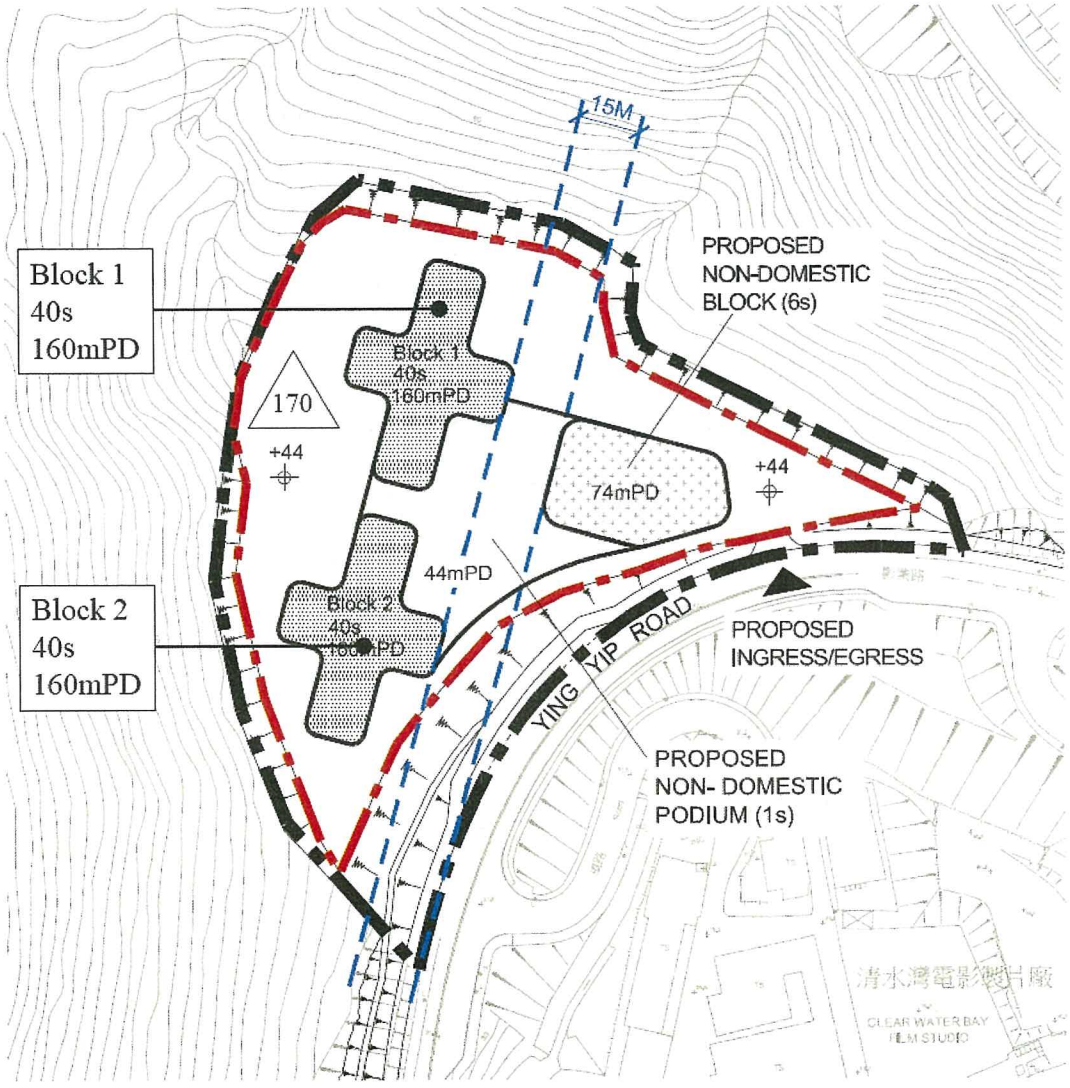


Figure 36 Conceptual Layout of SKI-2

8.4.1 Under NNE Wind Direction

Wind flowing over the mountain ridge will likely skim over the project site. The 15m building separation between the domestic blocks and the non-domestic block (dark blue dotted line in Figure 38) facilitates wind penetration through the site and into Ying Yip Road (pink arrow). The NNE-SSW aligned building block layout of the site reduces the building frontage facing incoming wind and will reduce the wake region to the downstream area. As the site and podium level is only slightly higher than the downwind area's level, wind flowing down from the mountainside will not be largely affected by the proposed podium.

The non-domestic block may block wind flowing down from the mountain from directly ventilating the western portion of Clear Water Bay Film Studio. However, the area under the wind shadow casted by the non-domestic block will be small as the majority of Clear Water Bay Film Studio is to the southeast of the project site.

Circulating wind from the valley (blue arrow) is likely to ventilate the western portion of the project site. As there are no developments directly to the south-southwest and southwest of the project site, SKI-2 will not have a significant impact to the surrounding areas.

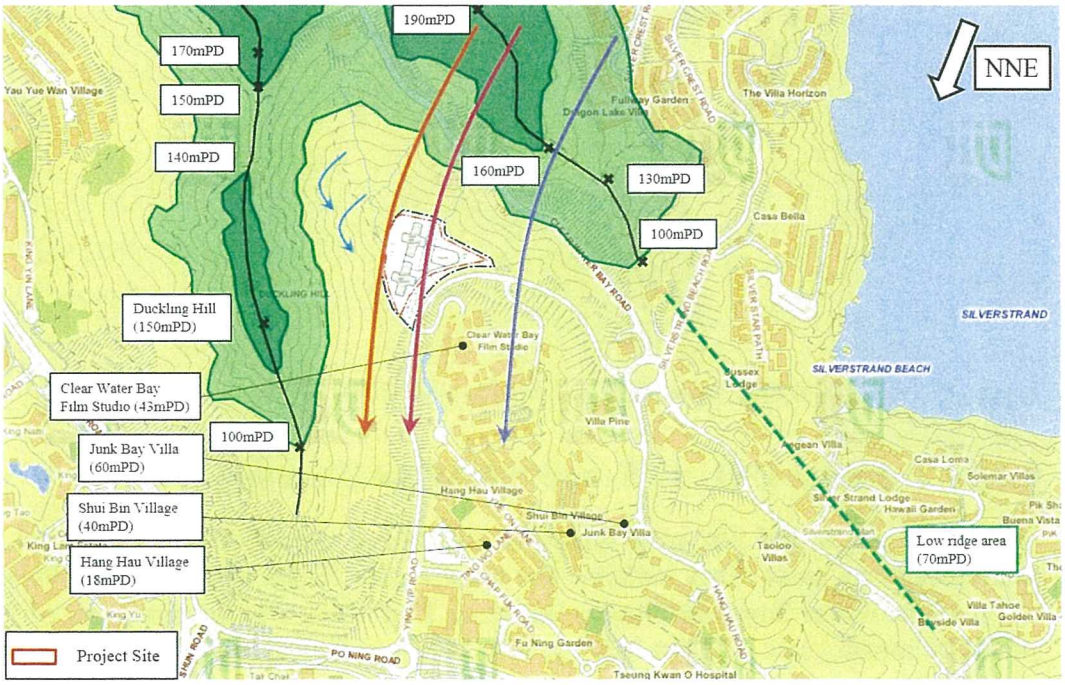


Figure 37 Future Wind Condition under NNE Wind around SKI-2

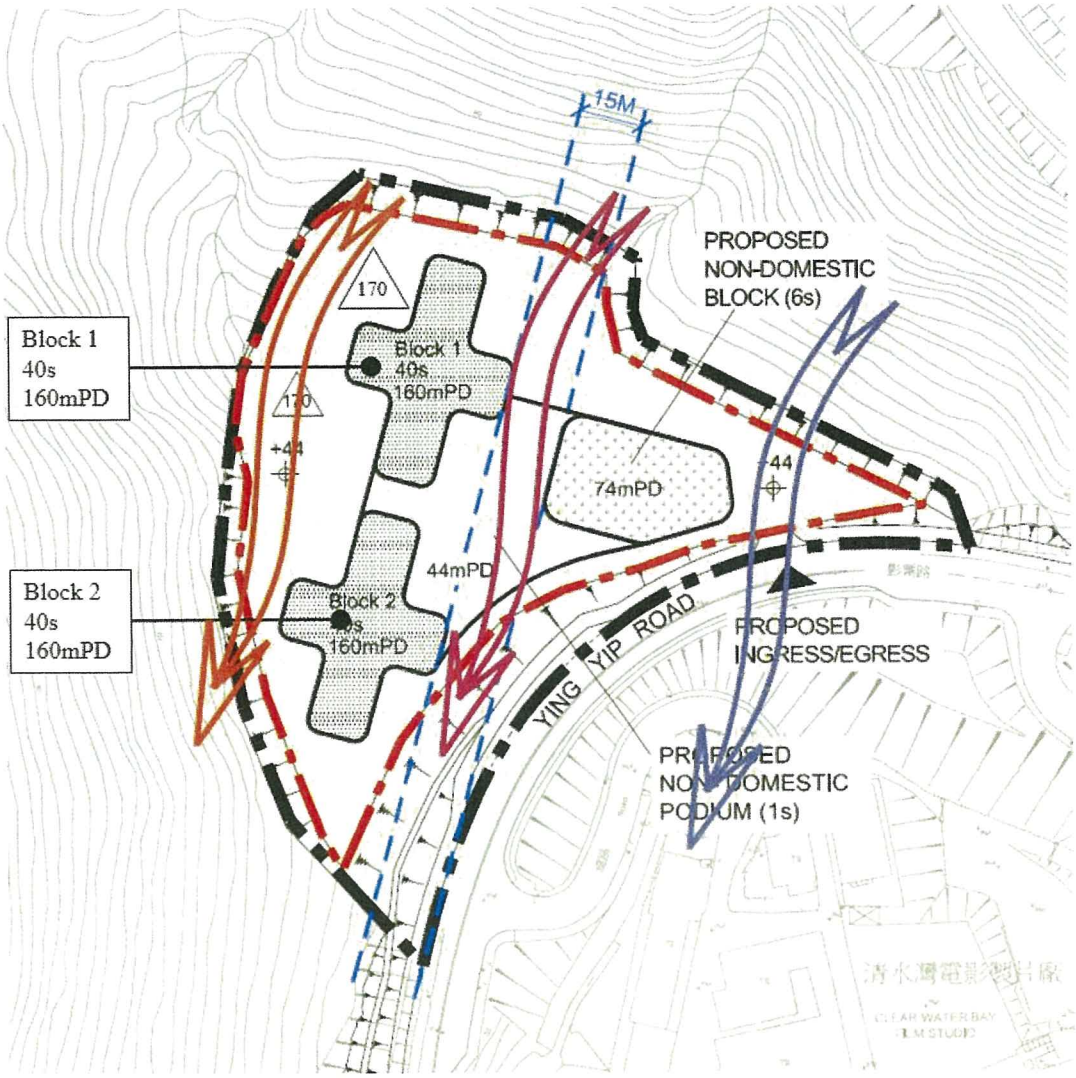


Figure 38 SKI-2 Building Separation and Air Flow for NNE Wind

8.4.2 Under ENE, E, S, and SW Wind Direction

Under ENE, E, S, and SW wind direction, the project site is located downwind of nearby built up areas. This includes the villa houses to the east of the mountain ridge, Clear Water Bay Film Studio and Hang Hau Village to the southeast of the potential housing site, and the built up area of Hang Hau further to the south and southwest

The closest development, Clear Water Bay Film Studio, will be ventilated under ENE and E wind direction by wind flowing from in from the low ridge area near Silverstrand.

Under SW wind direction the film studio will be ventilated by wind flowing around the western edge of the built up area of Hang Hau.

Under S wind direction, the film studio may experience calmer wind environment as the built up area of Hang Hau will restrict wind flow to the downwind area.

Therefore, the potential housing site at SKI-2 will have minimal impact to its surroundings under ENE, E, S, and SW wind direction as it is located downwind of nearby developments and there are no developments downwind to SKI-2.

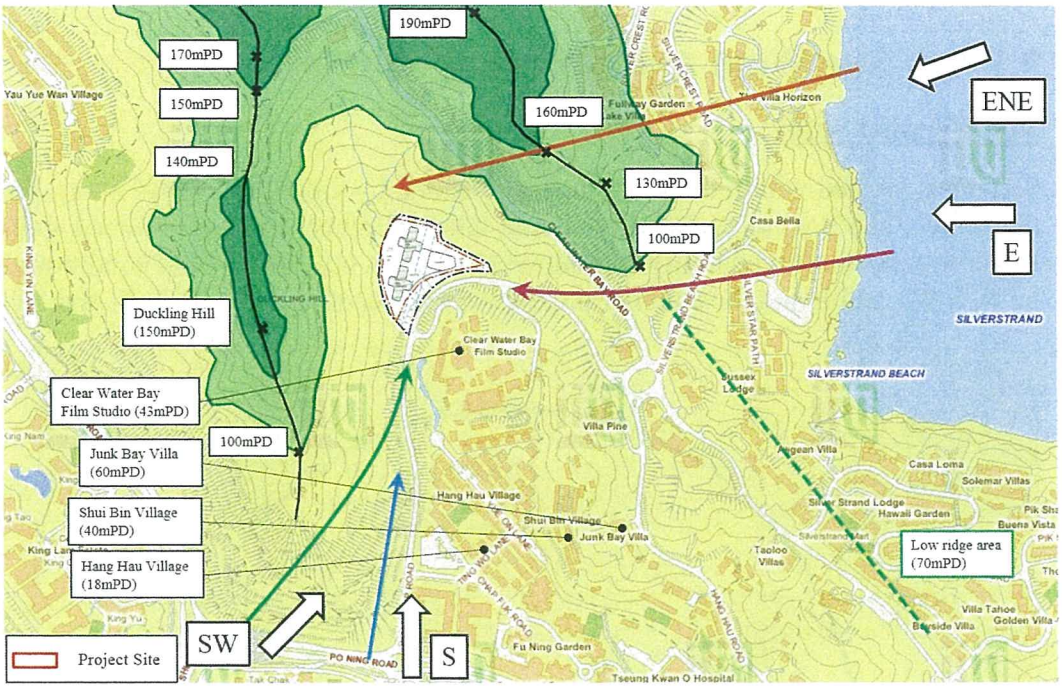


Figure 39 Future Wind Condition under ENE/E Wind around SKI-2

8.5 Recommendation for further study

The following wind enhancement features for the project site is recommended to be implemented in future designs:

- A 15m wide building separation between the domestic blocks and non-domestic block aligning NNE-SSW should be incorporated in facilitating the NNE wind to enter Ying Yip Road.

Quantitative AVA should be carried out at the next stage of the Project to demonstrate that the wind performance of the future scheme is no worse off than the current conceptual layout and for scheme design optimization.

9 Expert Evaluation on the Air Ventilation of SKI-11

9.1 Site Wind Availability at SKI-11

Wind Tunnel Study

SKI-11 is located within the study area as detailed by the *Wind Tunnel Study*, thus the project site's wind availability should take reference to the mentioned study. Experimental wind availability data shows the annual prevailing wind conditions to be N, ENE, and E and the summer prevailing wind conditions to be E, S, and SW.

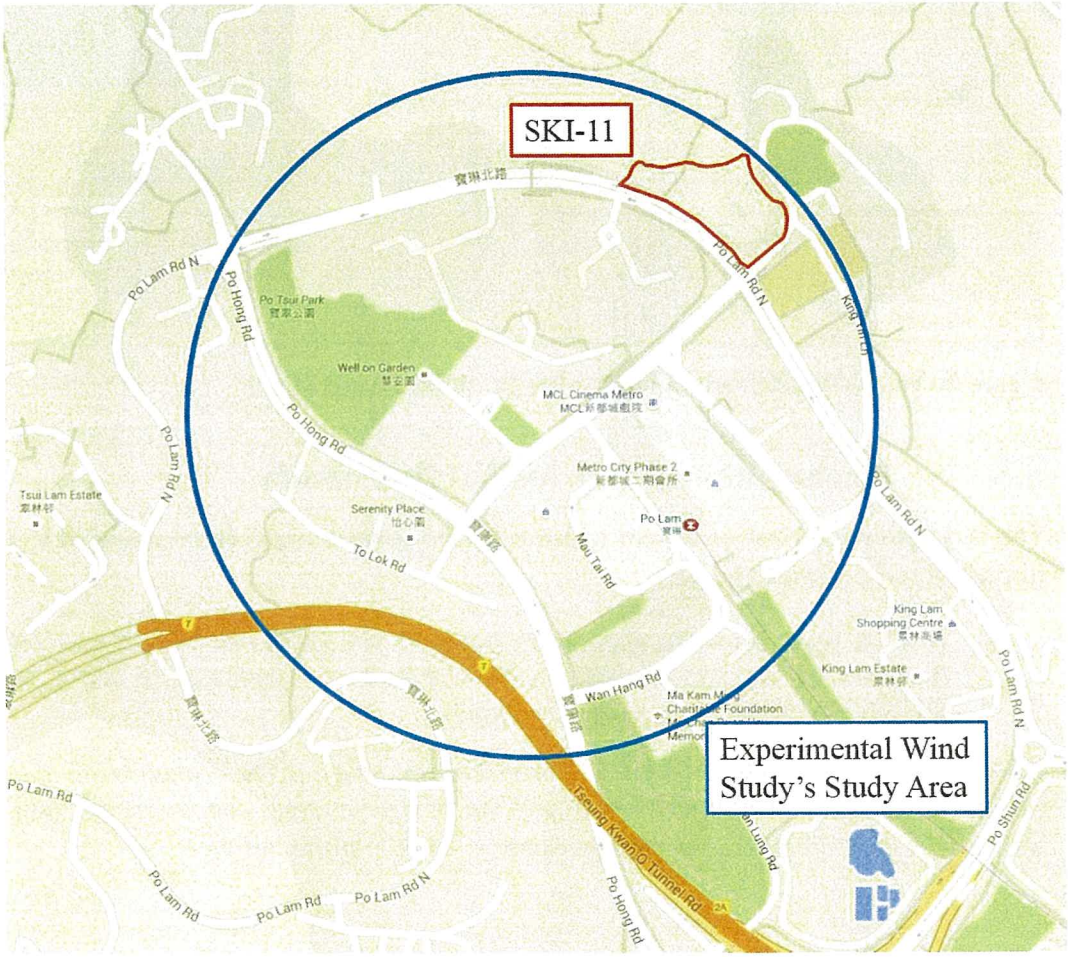


Figure 40 SKI-11 in relation to Experimental Wind Study's Study Area

RAMS

From the RAMS data provided by PlanD, the simulated wind rose of the area are presented below:

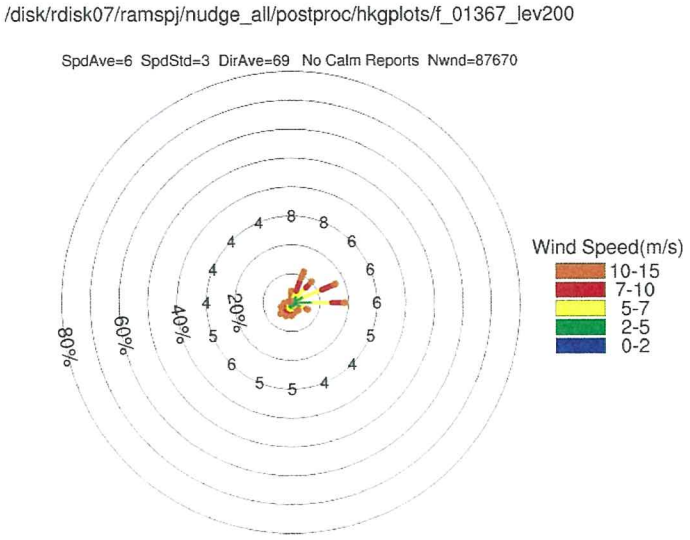


Figure 41 SKI-11 Annual Wind Rose – 200m (097,044)

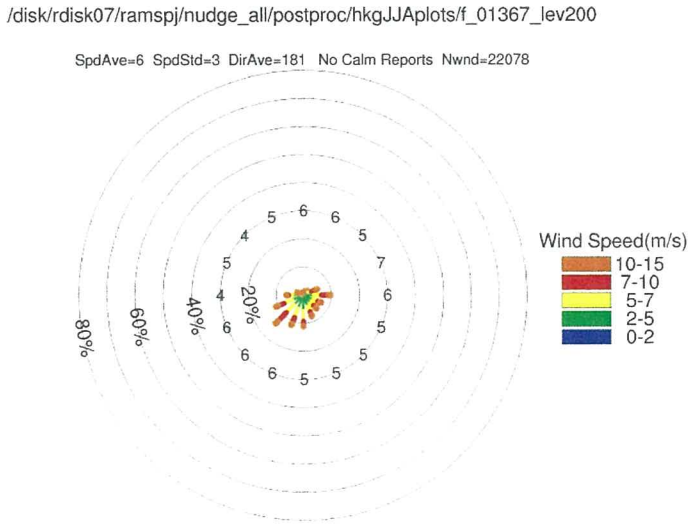


Figure 42 SKI-11 Summer Wind Rose – 200m (097,044)

From the set of data above, it can be seen that the annual wind conditions are mainly NNE, ENE, and E. While in the summer the prevailing wind conditions are S, SSW, and SW.

Concluded Site Wind Availability

Through the consideration of all data available, including the *Wind Tunnel Study* and RAMS, it is concluded that the prevailing wind condition for annual is N, NNE, ENE, and E, and the prevailing wind condition for summer is E, S, SSW, and SW.

9.2 Characteristics of Project Site and Its Surrounding Area

SKI-11 is located next to the urban developments of Po Lam area. Directly to the west of the project site is two high-rise residential developments of Ying Ming Court and Po Lam Estate. To the south of the site is the high-rise residential development of Yan Ming Court and Metro City Phase 2. To the east of these two high-rise residential developments is the low-rise school site of Tseung Kwan O Government Secondary School and various GIC buildings. To the east of the project site is the open ground of Yau Yue Wan Playground and the low-rise village houses of Yau Yue Wan Village. To the north of the project site is two high-rise residential towers, namely Fire Services Department Tseung Kwan O Rank and File Married Quarters (Married Quarters).

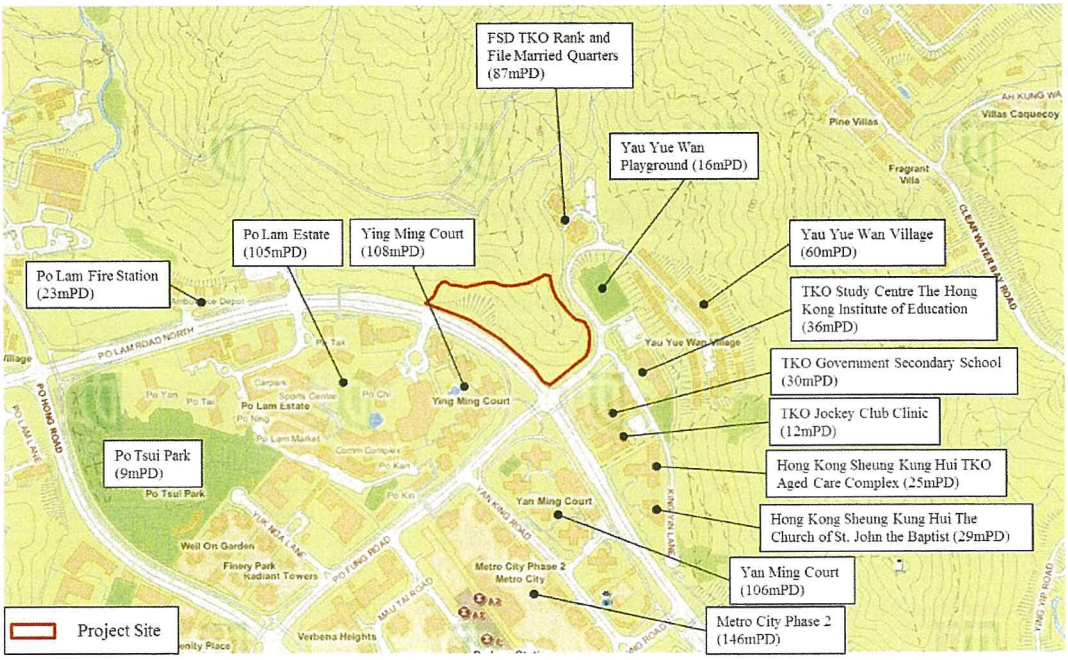


Figure 43 Vicinity Map of SKI-11

9.3 Qualitative Assessment of the Wind Condition – SKI-11

From the gathered wind availability data and through the observation of surrounding topography and developments, it is found that the annual prevailing wind will be of N, NNE, ENE, and E wind directions; whereas the summer prevailing wind will be of E, S, SSW, and SW wind directions. In the coming sections, N/NNE, ENE/E, S, and SSW/SW wind conditions would be qualitatively assessed.

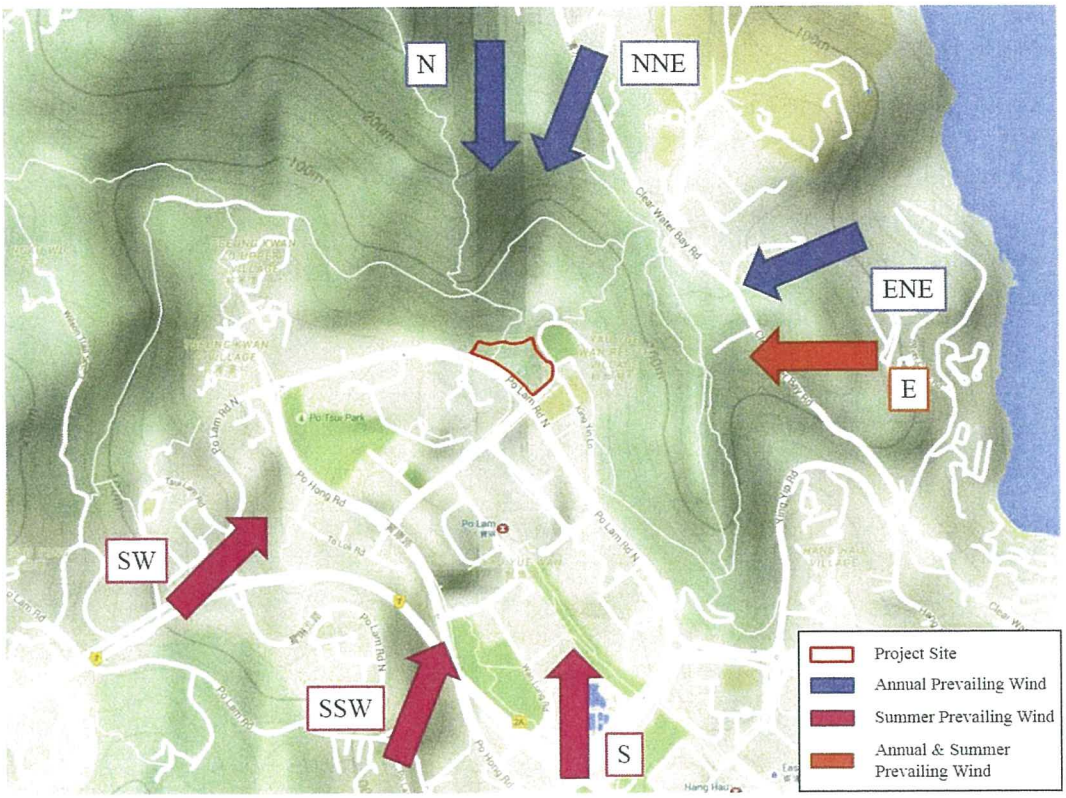


Figure 44 SKI-11 Prevailing Wind Environment

9.3.1 Under N/NNE Wind Direction

A valley is located to the north of the project site, which will channel incoming wind. Wind flowing down the valley is expected to flow around the Married Quarters before flowing to the project site (blue arrow). The Married Quarters is expected to cast a wind shadow to the eastern part of the project site. The mountain may cast a wind shadow to the western portions of the project site, which will also decrease the wind availability at Ying Ming Court and Po Lam Estate.

Wind flowing through the project site is expected to ventilate Yan Ming Court and into the road of Po Fung Road as well as flowing southwards down Po Lam Road North (pink arrow).

Wind flowing to the east of the site is expected to flow along the valley to ventilate Yau Yue Wan Village (purple arrow). The village is expected to receive satisfactory ventilation.

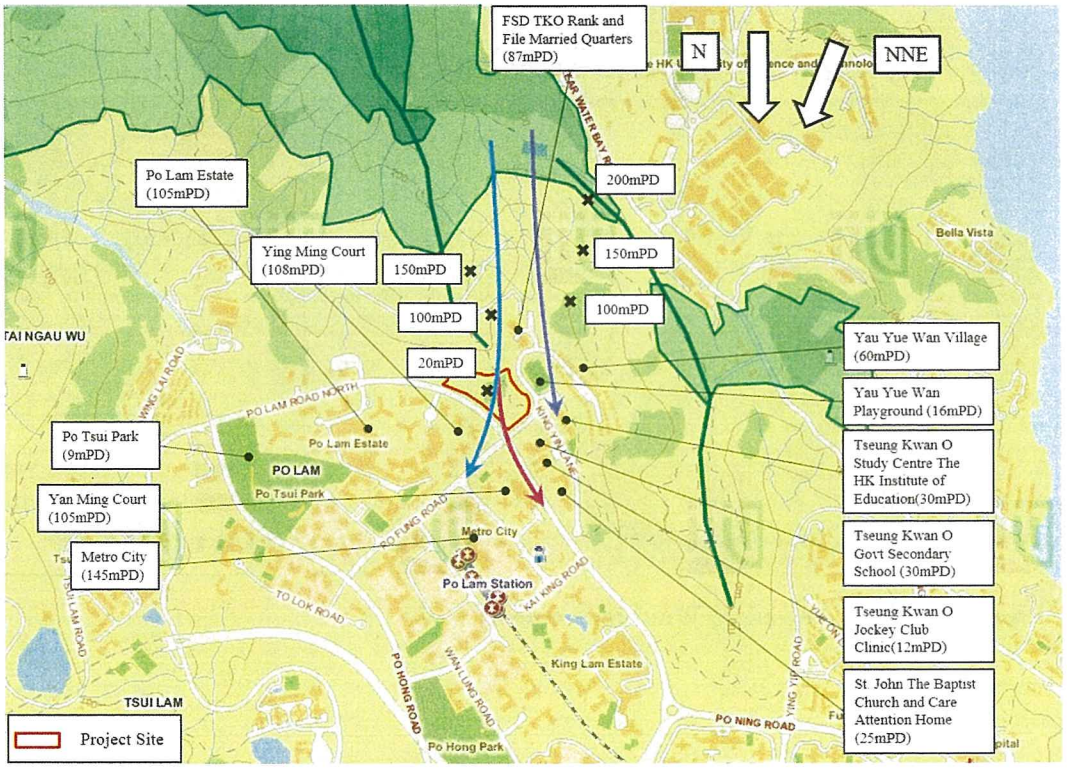


Figure 45 Existing SKI-11 N/NNE Prevailing Wind Condition

9.3.2 Under ENE/E Wind Direction

Wind flowing in from Silverstrand from the ENE/E direction is expected to flow over the mountain ridge before ventilating into Po Lam. Yau Yue Wan Village is predicted to be in the wind shadow of the mountain, thus the wind environment is expected to be relatively calm.

Wind is expected to flow through Po Lam in two ways, along Po Lam Road North (magenta arrow) and along Po Fung Road (blue arrow). The two roads will facilitate wind penetration through Po Lam.

Furthermore, the wind flowing over the mountain ridge is also expected to skim over Po Lam Estate (purple arrow), which is then expected to ventilate to the downstream region of Tsui Lam Estate. Po Tsui Park is expected to experience relatively calm wind environment as it is in the wind shadow of Po Lam Estate.

The project site is in the wind shadow of the mountain ridge to the east, and is expected to experience slightly calmer wind environments.

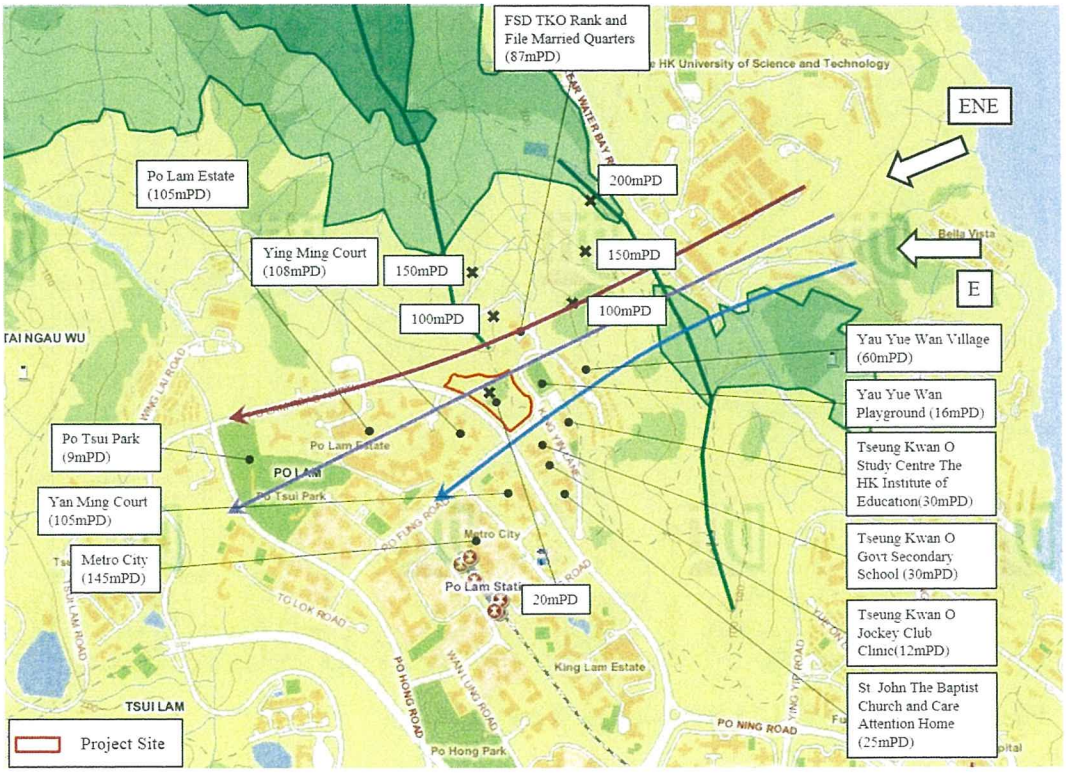


Figure 46 Existing SKI-11 ENE/E Prevailing Wind Condition

9.3.3 Under S Wind Direction

The built-up area of Po Lam will restrict air flowing from the S direction as there are no major air paths aligned with the incoming wind. Wind is expected to be flowing around the built-up area and likely to flow along the MTR Railway Alignment (blue arrow).

The project site is located to the leeward side of the built-up areas. It is expected that the project site will experience calm wind environment as no direct air path is present to ventilate the site. Similarly, the Married Quarters may also experience calm wind environment.

The eastern parts of Yau Yue Wan Village may receive more favourable wind environment as it may receive wind flowing around the eastern edge of Po Lam (orange arrow).

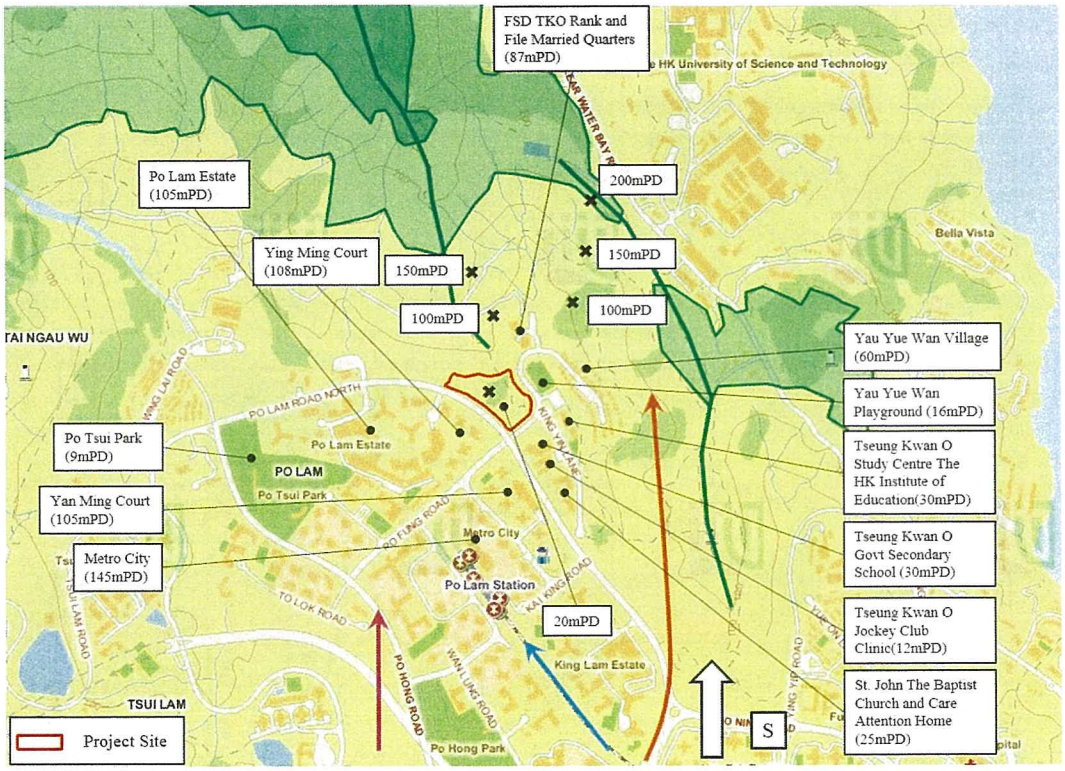


Figure 47 Existing SKI-11 S Prevailing Wind Condition

9.3.4 Under SW/SSW Wind Direction

Wind will enter from the low ridge area near Ma Yau Tong and ventilate into Po Lam under the summer SW/SSW wind condition. Low level wind flowing towards Po Fung Road will be obstructed by the south-eastern block of Serenity Place, restricting wind flow into Po Fung Road. However, high level wind will flow over the top of the south-eastern block of Serenity Place and is expected to reattach to the ground level further down Po Fung Road, which will then flow to the east of the project site and ventilate Yau Yue Wan Village (pink arrow).

Po Tsui Park is expected to receive satisfactory wind environment (blue arrow); however, Po Lam Estate will likely block wind from travelling to the leeward side due to there being no local air path aligning with the SW wind.

The south-eastern section of the project site will likely receive wind flowing along Po Fung Road, but the north-western section of the project site is in the wind shadow of Po Lam Estate as well as Ying Ming Court.

The Married Quarters in addition to being downwind of Po Lam Estate is also located on the leeward side of the foot of the mountain and is expected to be experience calmer wind environment.

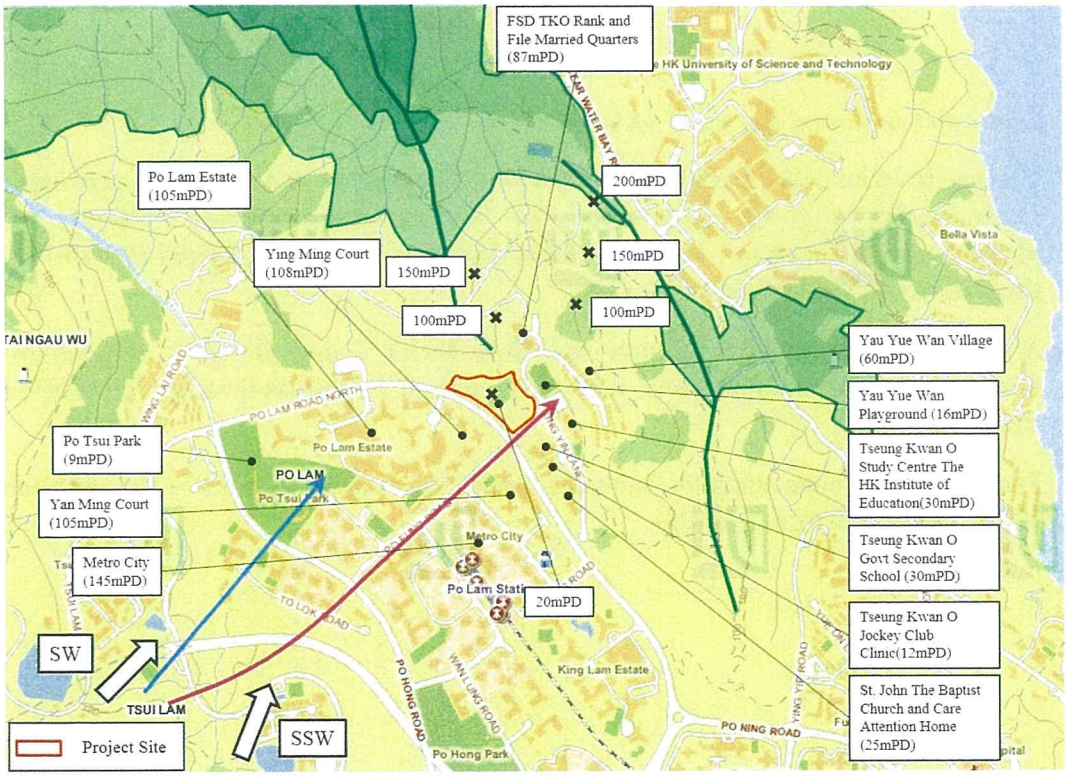


Figure 48 Existing SKI-11 SSW/SW Prevailing Wind Condition

9.4 Evaluation of Conceptual Layout Characteristics

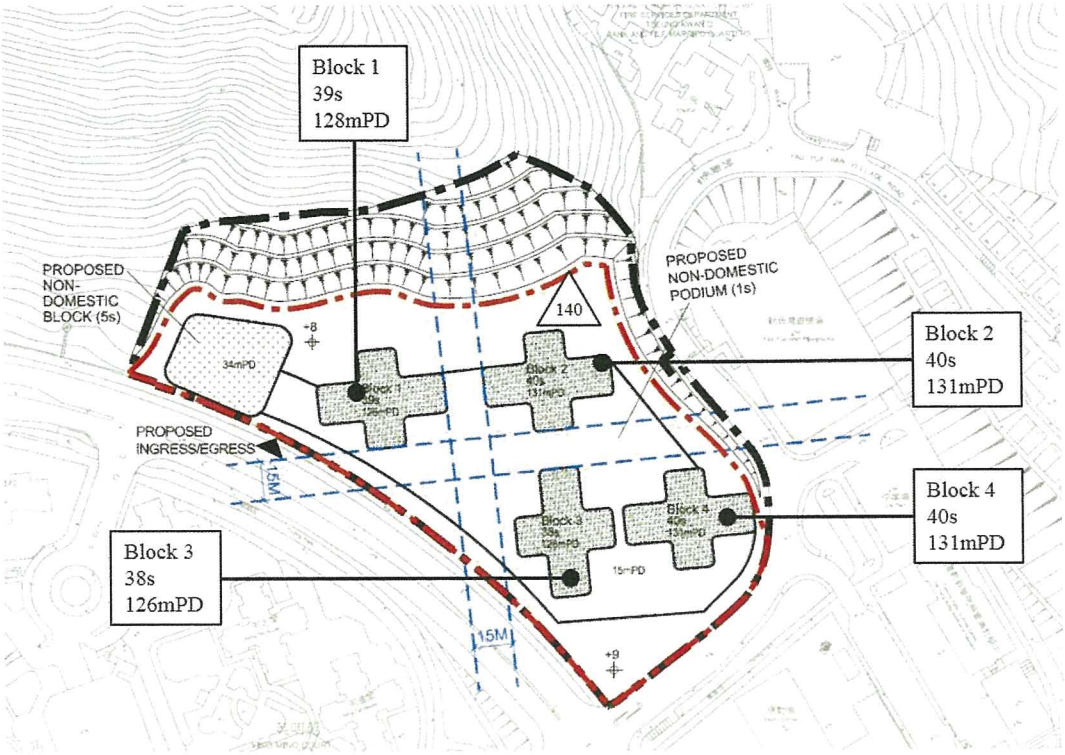


Figure 49 Conceptual Layout of SKI-11

The site level of SKI-11 is at 8-9mPD. The conceptual layout of SKI-11 consists of four point form high-rise domestic blocks. The proposed maximum building height of the domestic block is 140mPD. A non-domestic block with height of 34mPD is situated at the western end of the site.

A 15m wide building separation separates Block 1 and Block 2, aligned N-S direction. A 15m wide building separation aligned E-W runs through the centre of the site.

The domestic blocks and non-domestic blocks are situated on top of a non-domestic podium with height of 15mPD.

9.4.1 Under N/NNE Wind Direction

Under the annual prevailing N/NNE wind direction, wind will flow down the valley. Wind flowing between the mountain ridge and Married Quarters is expected to ventilate SKI-11. The building blocks of SKI-11 is expected to cast a wind shadow over to the leeward side, affecting Tseung Kwan O Govt. Secondary School, Yan Ming Court, and possibly Ying Ming Court.

The 15m wide N-S building separation separating Block 1 and Block 2 (dark blue dotted line in Figure 51) allows wind to penetrate through the site and thus slightly reducing the wake region. The immediate surrounding's pedestrian level will be in the wind shadow of the podium.

The local air path is opens towards both Po Fung Road (purple arrow) and Po Lam Road North entrances (pink arrow), allowing wind to ventilate deeper into Po Lam and also potentially ventilating the outdoor area of Yan Ming Court.

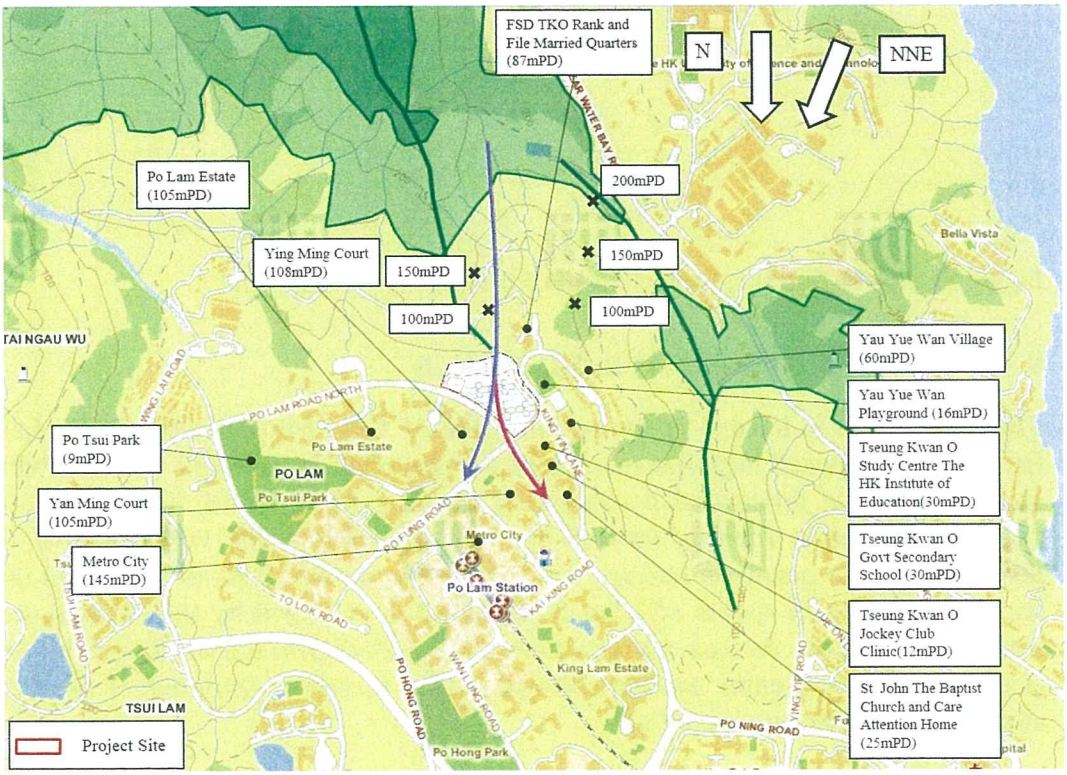


Figure 50 Future Wind Condition under N/NNE Wind around SKI-11

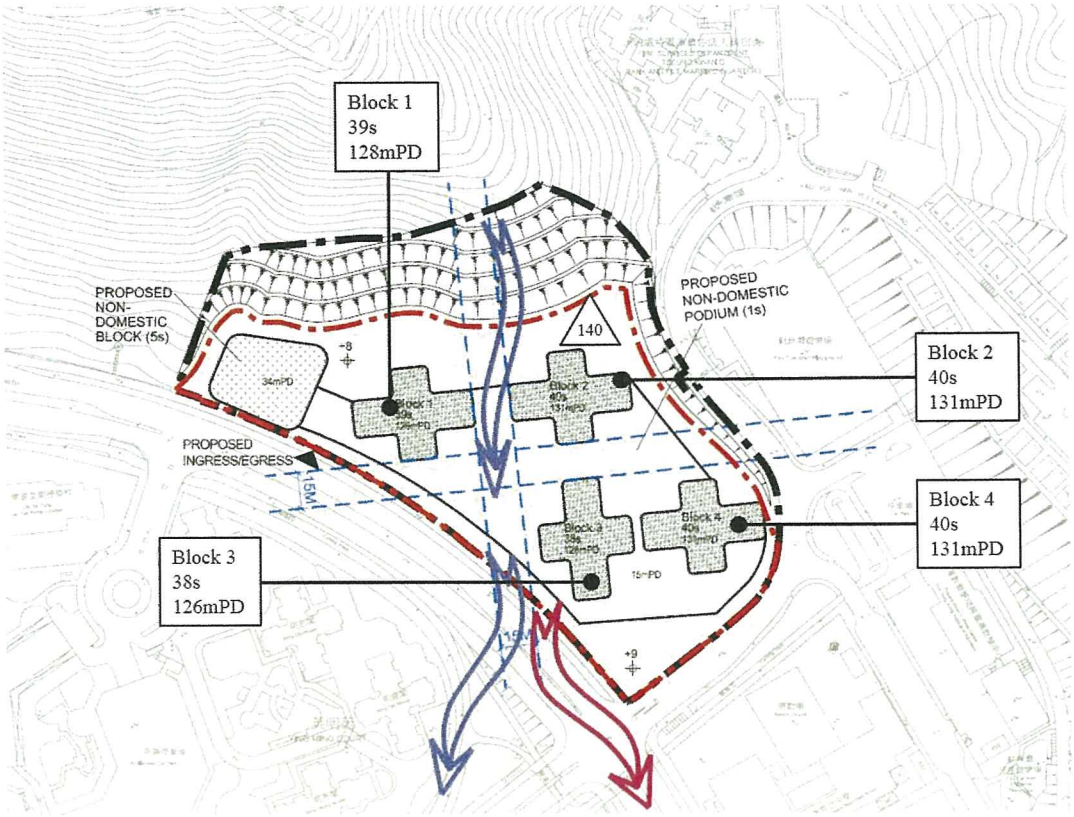


Figure 51 SKI-11 Building Separation and Air Flow for N/NNE Wind

9.4.2 Under ENE/E Wind Direction

The project site is located at the upwind side of Ying Ming Court and Po Lam Estate. The proposed high rise residential development is expected to cast a wind shadow over the downwind development of Ying Ming Court. The 15m E-W building separation running through the site will reduce the wind shadow by allowing wind to penetrate through the site (purple arrow). It should be noted that the pedestrian open spaces of Ying Ming Court is encircled by the estate's own residential blocks to the east, where under existing conditions the wind environment is already relatively calm, and the addition of SKI-11 will slightly reduce the wind availability but not significantly.

Wind flowing to the north of the project site will ventilate into Po Lam Road (magenta arrow). However, the non-domestic block is expected to reduce part of the low level wind ventilating Lok Sin Tong Lau Tak Primary School.

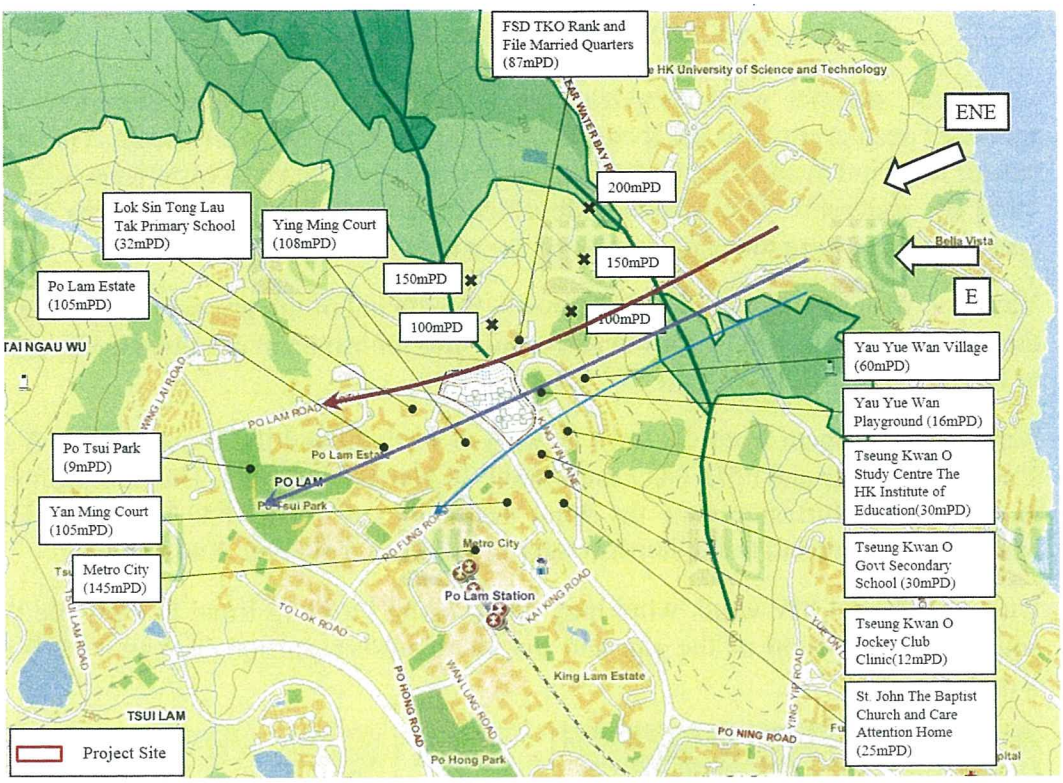


Figure 52 Future Wind Condition under ENE/E Wind around SKI-11

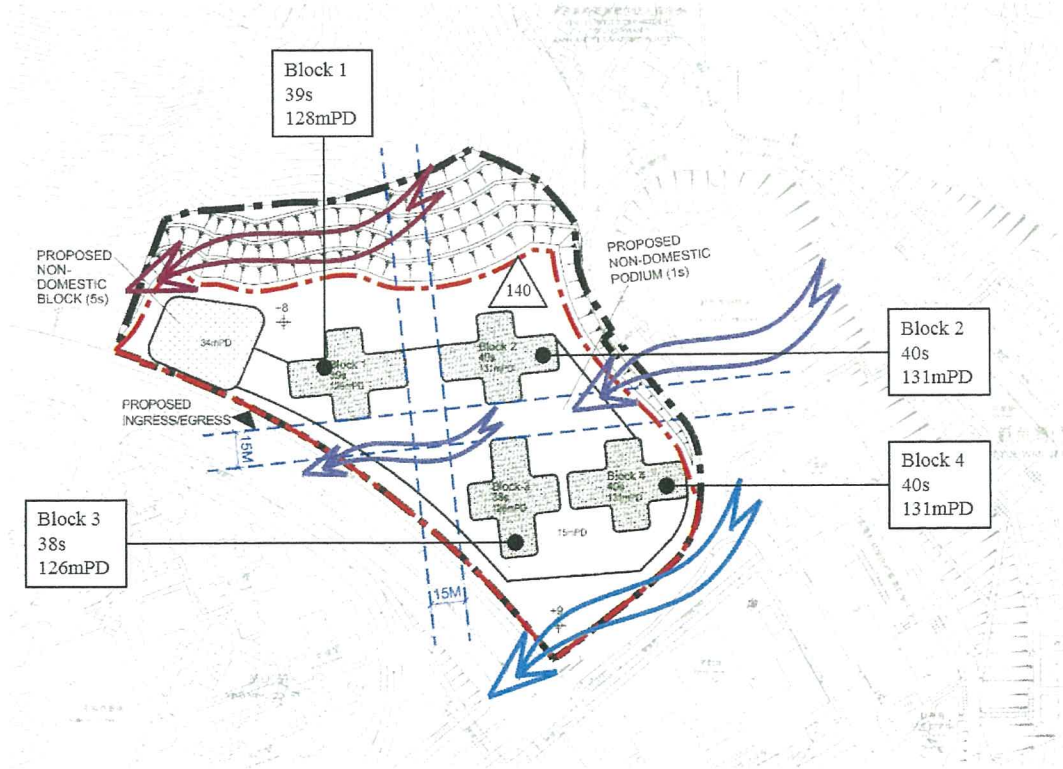


Figure 53 SKI-11 Building Separation and Air Flow for ENE/E Wind

9.4.3 Under S/SSW/SW Wind Direction

Under the summer wind conditions of S, SSW, and SW wind direction, the proposed project site is in the leeward side of the built-up area of Po Lam. This will reduce the wind availability to the site and the site is expected to experience calmer wind environments. The proposed developments extends the built-up area of Po Lam, thus enlarging the wake region of the whole built up area.

Yau Yue Wan Playground, located directly downwind of the project site will be in the wind shadow casted by the development, thus the wind environment is expected to be calm under S, SSW, and SW wind direction.

Further downstream from the built up area of Po Lam and the project site is Yau Yue Wan Village and FSD TKO Rank and File Married Quarters. The development is expected to further reduce the wind availability of FSD TKO Rank and File Married Quarters and to the north-western portion of Yau Yue Wan Village.

Under SSW and SW wind, wind may travel along Po Fung Road to ventilate the south-eastern portion of the site and the south-eastern portion of Yau Yue Wan Village.

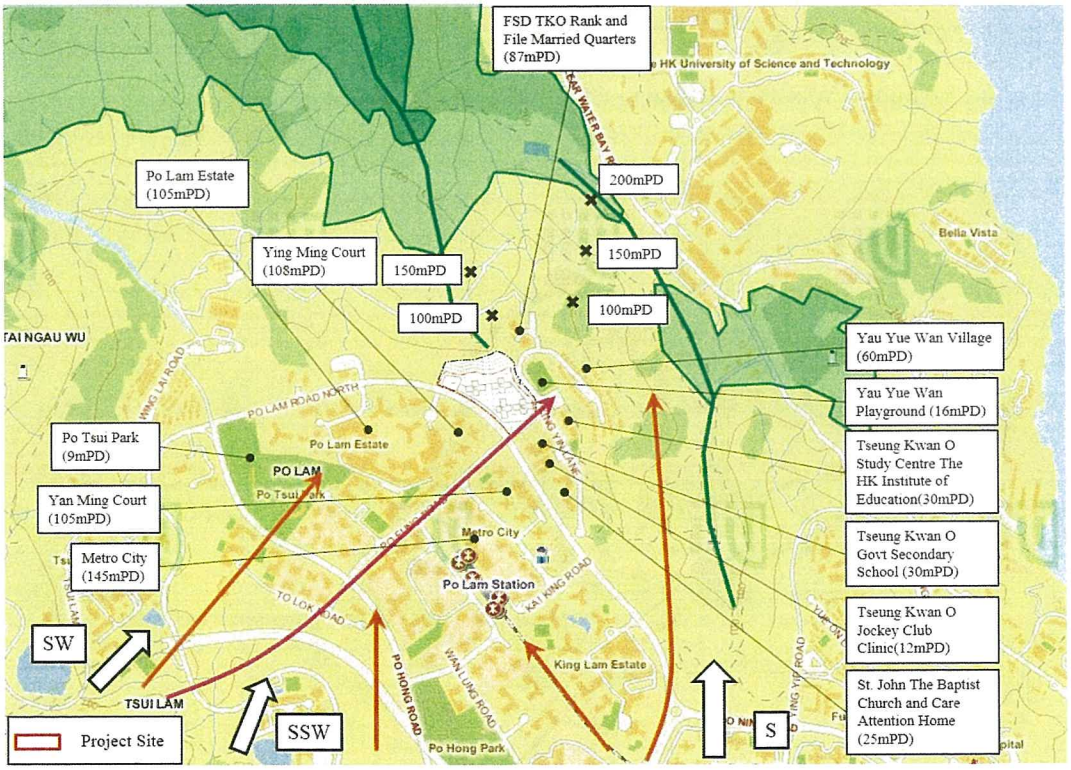


Figure 54 Future Wind Condition under S/SSW/SW Wind around SKI-11

9.5 Recommendation for further study

The following wind enhancement features for the project site is recommended to be implemented in future designs:

- One 15m wide building separations aligned N-S should be incorporated, allowing the N/NNE winds to enter Ying Ming Court, Yan Ming Court, Po Fung Road, and Po Lam Road North through the development.
- One 15m wide building separation aligned E-W should be incorporated, allowing the ENE/E winds to penetrate through the site and enter Ying Ming Court and Po Lam Road North.
- Further enhancement features should be considered at the next stage of the Project, e.g. void between tower and podium, to further alleviate the potential impacts on the surrounding wind environment induced by the proposed development.

Quantitative AVA should be carried out at the next stage of the Project to demonstrate that the wind performance of the future scheme is no worse off than the current conceptual layout and for scheme design optimization.

10 Expert Evaluation on the Air Ventilation of SKI-12

10.1 Site Wind Availability at SKI-12

RAMS

The available wind availability data at the project site of SKI-12 includes only the RAMS data provided by Plan D, in which the simulated wind rose are presented in the figures below.

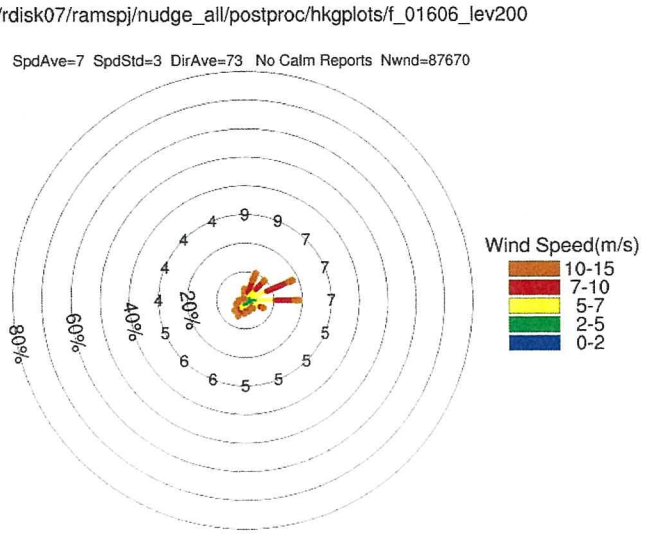


Figure 55 SKI-12 Annual Wind Rose – 200m (101,039)

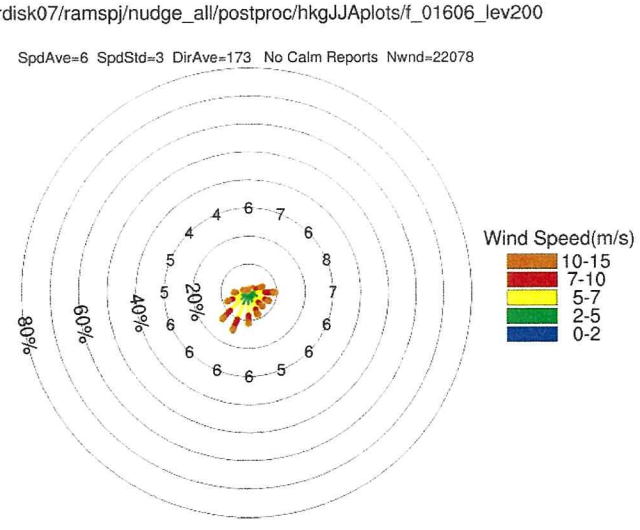


Figure 56 SKI-12 Summer Wind Rose – 200m (101,039)

Concluded Site Wind Availability

From the RAMS data it was noted that the annual prevailing wind is of NNE, ENE, and E direction and the summer prevailing wind is of S, SSW, and SW direction.

10.2 Characteristics of Project Site and Its Surrounding Area

SKI-12 is located to the northeast of LOHAS Park and directly to the east of Hong Kong Movie City. The existing ground level at the project site ranges from 33mPD, to the east, and 55mPD, to the west.

The mountain range including Sheung Yeung Shan, Ha Yeung Shan, Miu Tsai Tun, and High Junk Peak is located to the east of the project site where the mountain ridge reaches 340mPD.

At LOHAS Park there are two completed high-rise residential developments with 9 committed/planned high rise residential developments with a maximum building height of 217mPD.

To the south of the project site is the high-rise residential development of The Beaumount and a committed residential development, namely Proposed Residential Development Area 8, Shek Kok Road with a maximum building height of 120mPD and 135mPD respectively.

To the north of the project site are the proposed Fire and Ambulance Services Academy and the Proposed Fire Services Department – Rank & File Quarters (Rank & File Quarters). The maximum building height of the Fire and Ambulance Services Academy in Area (a) is 100mPD, except a fire services rescue training tower up to 114mPD, and in Area (b) is 120mPD. The maximum building height of the Rank & File Quarters is 118mPD.

To the east of LOHAS Park are three Proposed Data Centres with a maximum building height of 60mPD and a Proposed Radio Television HK Broadcasting House with a maximum building height of 60mPD.

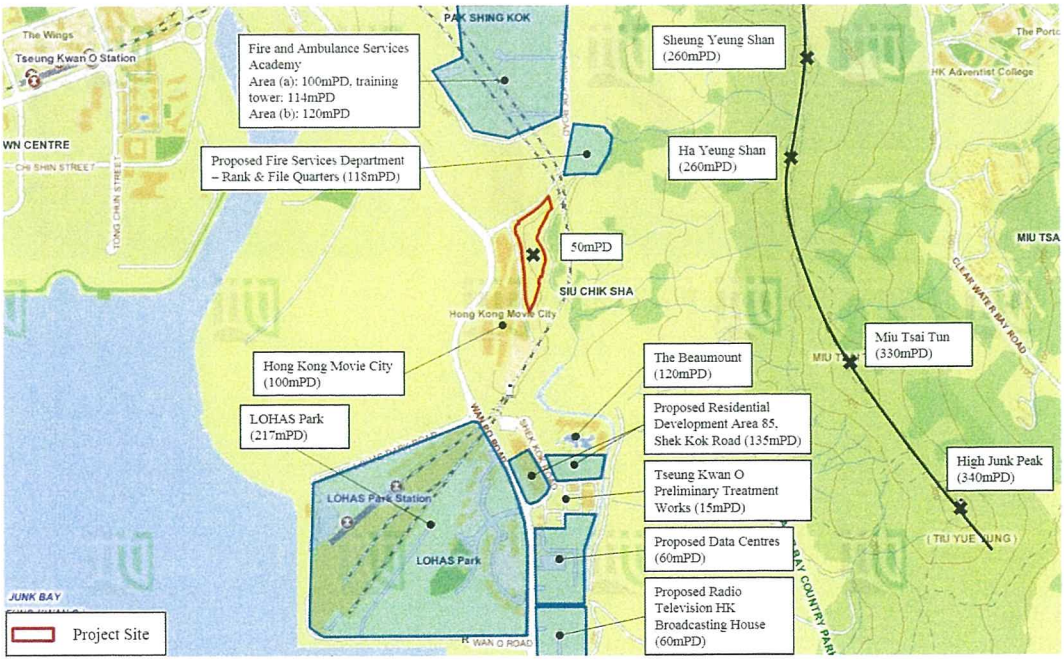


Figure 57 Vicinity Map of SKI-12

10.3 Qualitative Assessment of the Wind Condition – SKI-12

The annual prevailing wind conditions are NNE, ENE, and E winds while the summer prevailing wind conditions are S, SSW, and SW. In the following sections, the wind performance under NNE, ENE/E, S/SSW, and SW directions will be qualitatively assessed.

Even though the mountain range consisting of Sheung Yeung Shan, Ha Yeung Shan, Miu Tsai Tun, and High Junk Peak is located to the east of the project site, according to the RAMS data of the annual wind availability at 200m, E and ENE winds are still dominant prevailing winds, indicating that the incoming wind is able to flow over the mountain and ventilate down into the study area.

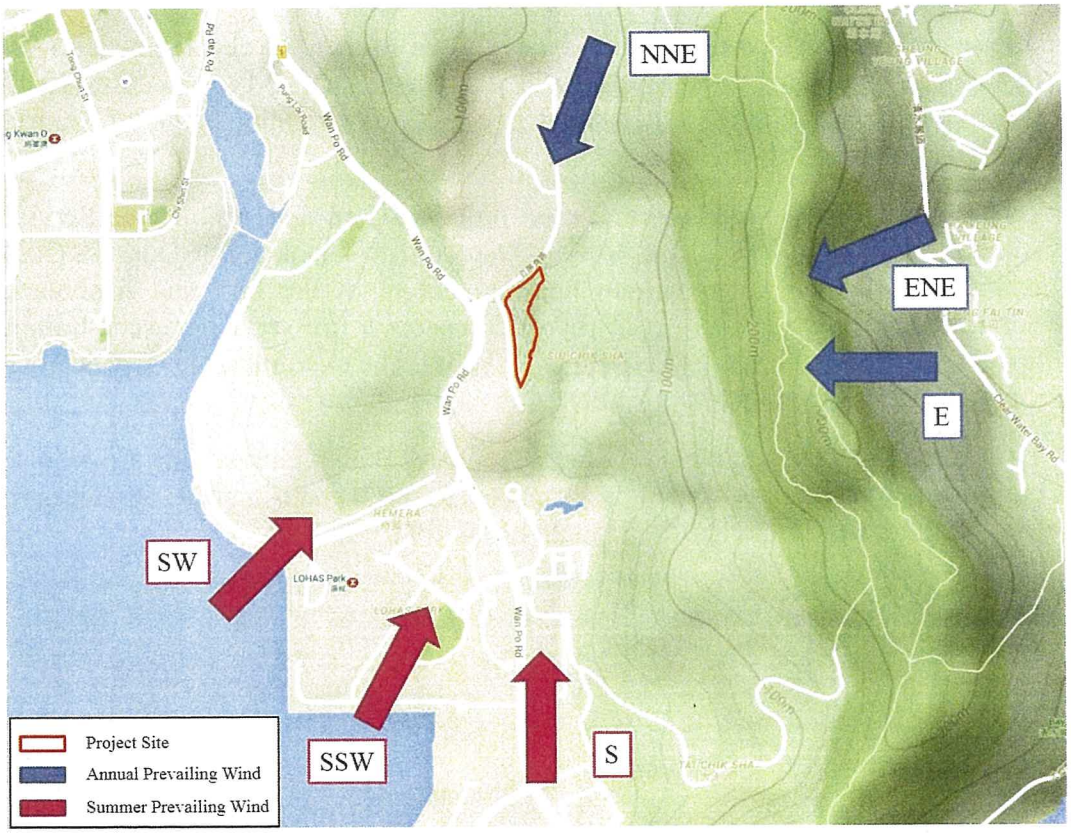


Figure 58 SKI-12 Prevailing Wind Environment

10.3.1 Under NNE Wind Direction

Wind from the NNE direction will flow into the study area through the low ridge area at Silverstrand. Upwind of the Fire and Ambulance Services Academy and the Proposed Rank & File Quarters is open ground, thus the two proposed Fire Service Department's developments are expected to have good wind environment.

Both the Fire Services Department's development will cast a wind shadow over the downstream area. This may reduce the wind availability at Hong Kong Movie City and the open ground of SKI-12. Some incoming wind is expected to be channelled into Pak Shing Kok by the two proposed developments (green arrow). The wind will then ventilate into the open ground of the proposed site of SKI-12 and also ventilate Hong Kong Movie City.

The mid-rise structures of Fire and Ambulance Services Academy may allow wind flowing over the site to reattach to the ground before ventilating LOHAS Park (pink arrow). The western portion of LOHAS Park will thus expect good wind availability. However, Hong Kong Movie City along with The Beaumount and Proposed Residential Development Area 85 is expected to cast a wind shadow over the eastern portion of LOHAS Park, reducing wind availability at those areas.

Wind flowing to the east of the Proposed Rank & File Quarters will be able to ventilate the high-rise development of The Beaumount (purple arrow). However, The Beaumount is built like a wall towards the incoming wind and is expected to obstruct downwind wind availability, including the Proposed Residential Development Area 85, the Proposed Data Centres, and Proposed Radio Television HK Broadcasting House.

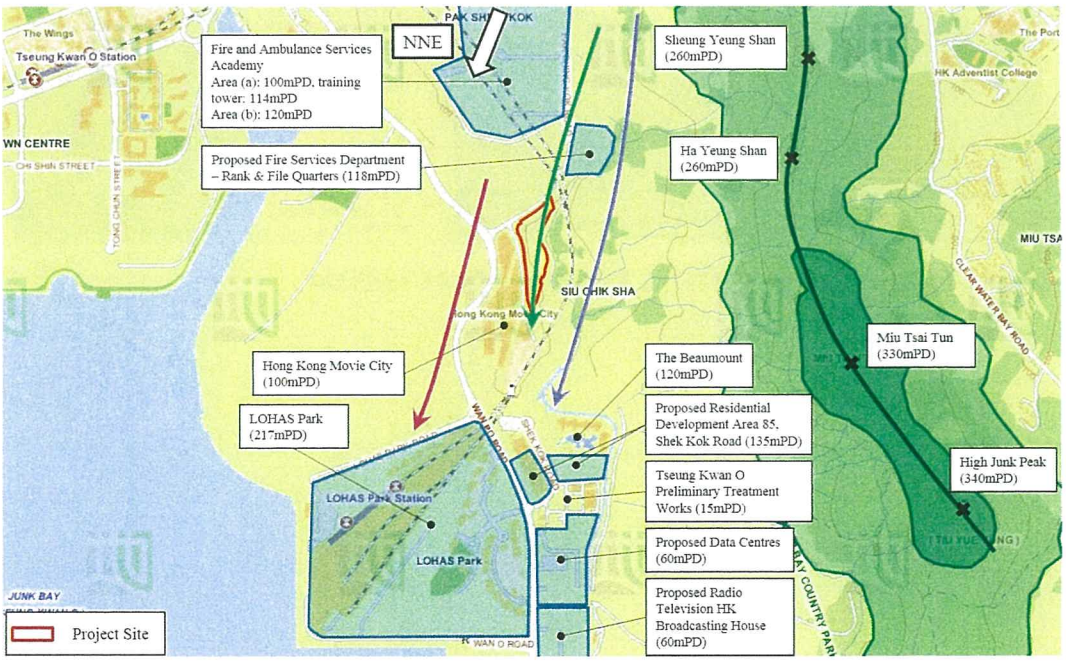


Figure 59 Existing SKI-12 NNE Prevailing Wind Condition

10.3.2 Under ENE/E Wind Direction

Wind flowing over the mountain range to the east of the study area is expected to reattach to the ground level and ventilate the existing open site ground of SKI-12 and thus ventilate into Hong Kong Movie City (pink arrows). The bulky nature of Hong Kong Movie City is expected to cast a significant wind shadow to the west of the development. However, as there are no existing, proposed, or committed developments to the west of Hong Kong Movie City, the development is not expected to have any impact to the surrounding developments.

Wind flowing down from the mountains will also be able to ventilate both the Proposed Fire Service Department's developments and those developments to the east of Wan Po Road. As the project site of SKI-12 is to the south of the Proposed FSD developments, the Proposed FSD developments is not expected to affect SKI-12.

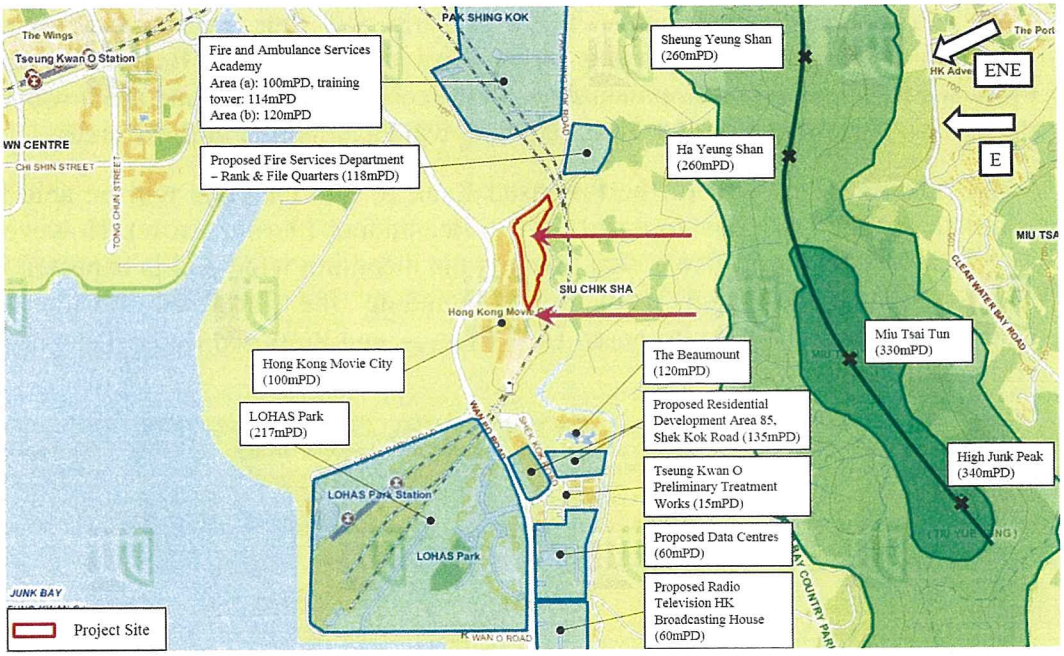


Figure 60 Existing SKI-12 ENE/E Prevailing Wind Condition

10.3.3 Under S/SSW Wind Direction

LOHAS Park is to be fully built up with 11 residential developments, and as there are no local wind paths aligned in the N-S direction, LOHAS Park is expected to block wind from penetrating through the site to ventilate downwind areas. The Proposed Data Centres to the east of Wan Po Road is also expected to restrict wind from flowing north. In addition, the Proposed Residential Development Area 85 and The Beaumount is expected to further restrict wind flow as the sites are aligned perpendicular to incoming wind. Hong Kong Movie City and the open site ground at SKI-12 is expected to be affected by the upstream developments.

The built-up area is expected to channel wind through Wan Po Road (pink arrow). Wind flowing north through Wan Po Road may be able to ventilate Hong Kong Movie City. Mid-level winds may flow over the top of Proposed Data Centres and Proposed Radio Television HK Broadcasting House and flow through Shek Kok Road, between the two sites of the Proposed Residential Development Area 85 (purple arrow). As the open ground of SKI-12 is of 50mPD elevation, the wind flowing through Shek Kok Road may assist in the ventilation of SKI-12.

The N-S aligned Hong Kong Movie City has a reduced building frontage to the incoming wind. Wind flowing north through Wan Po Road and Shek Kok Road is expected to flow around Hong Kong Movie City and ventilate the Fire and Ambulance Services Academy. Wind flowing around the east of the built-up area is expected to ventilate the Proposed Rank & File Quarters (orange arrow).

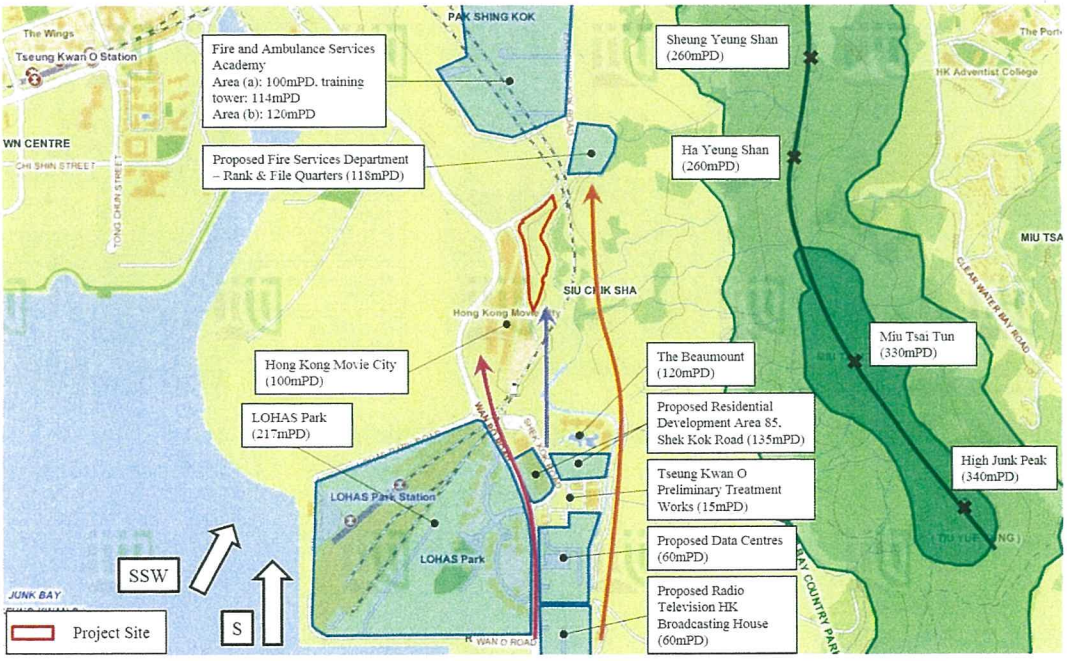


Figure 61 Existing SKI-12 S Prevailing Wind Condition

10.3.4 Under SW Wind Direction

Under SW wind direction, the wind will be flowing in from Junk Bay to ventilate LOHAS Park. As there are no air paths through LOHAS Park, the development is expected to cast a large wind shadow to the northeast, reducing the wind availability at Tseung Kwan O Preliminary Treatment Works, Proposed Data Centres, Proposed Residential Development Area 85, and The Beaumount.

Hong Kong Movie City will have good wind environment as wind flowing to the north of LOHAS Park will be able to ventilate the development (orange arrow). However, Hong Kong Movie City will cast a wind shadow over the open ground of SKI-12, thus the open ground is expected to experience a relatively calm wind environment.

The Fire and Ambulance Services Academy and the Proposed Rank & File Quarters are expected to have good wind environment as the upwind environment is of undeveloped area and the sea (purple arrow).

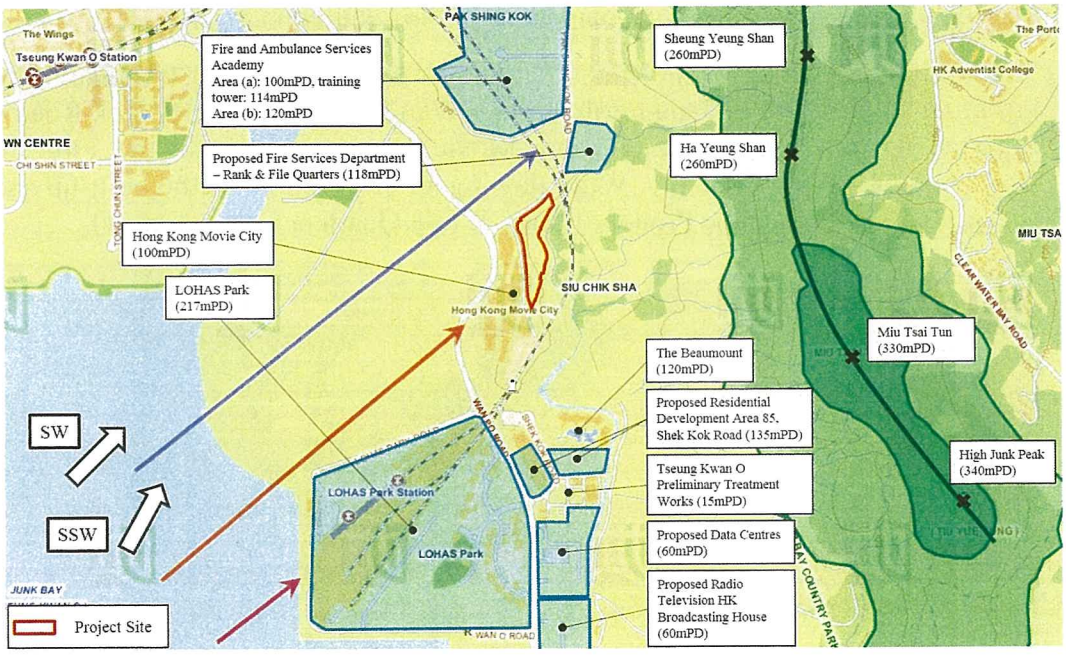


Figure 62 Existing SKI-12 SW Prevailing Wind Condition

10.4 Evaluation of Conceptual Layout Characteristics

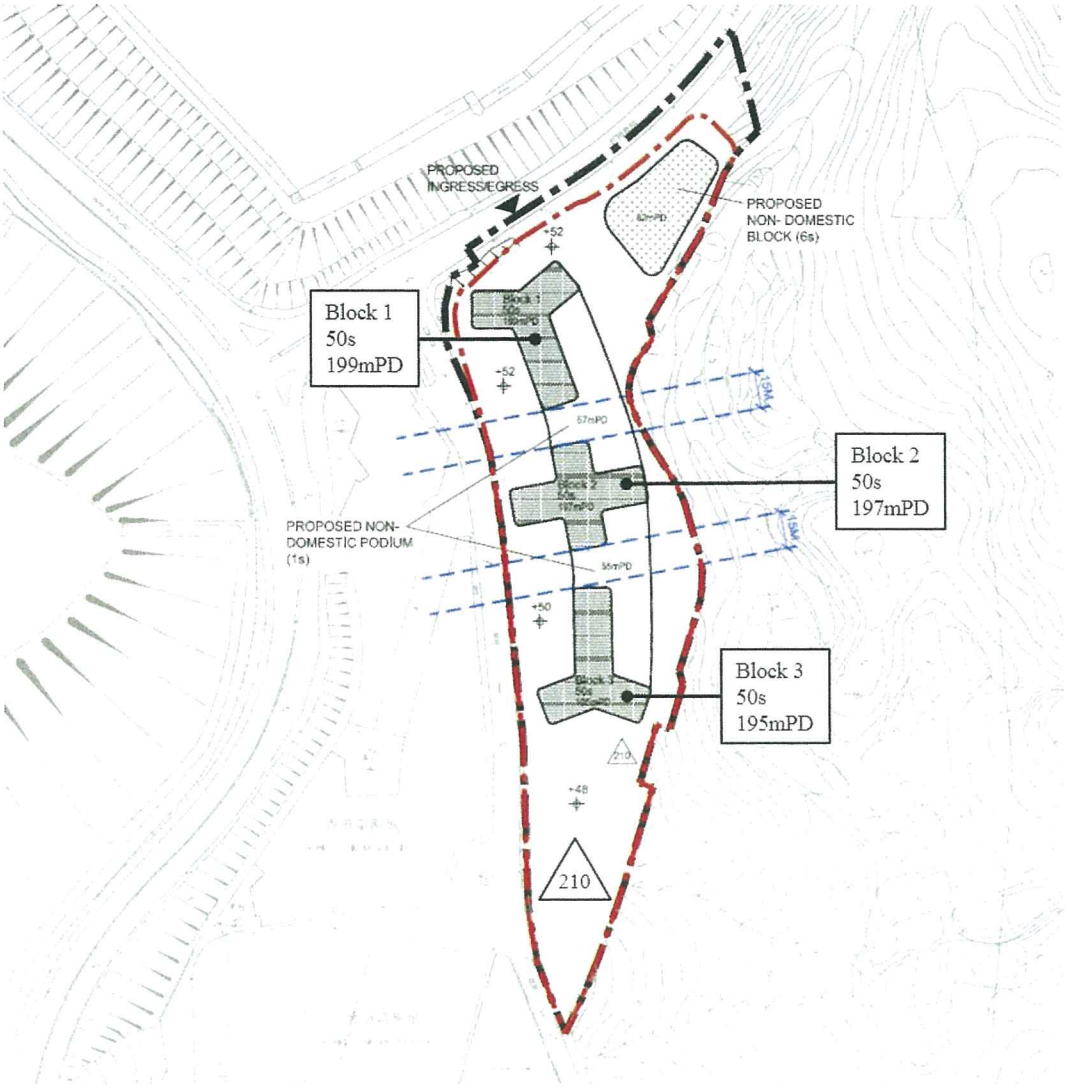


Figure 63 Conceptual Layout of SKI-12

The conceptual layout of SKI-12 has a longitudinal site area with site level ranging from 48mPD to 52mPD from south to north. Three domestic blocks, two which are Y-form and one which is point-form, are aligned in the N-S direction with a proposed maximum building height limit of 210mPD.

The domestic blocks are separated from each other by a 15m wide building separation, which are aligned to the ENE-WSW direction. The domestic blocks are situated on top of a non-domestic podium with height ranging from 55mPD to 57mPD.

A non-domestic block is situated at the northeast corner of the site with a proposed building height of 82mPD.

10.4.1 Under NNE Wind Direction

Wind flowing from Silverstrand will be largely unobstructed and the incoming wind is expected to flow between the Fire and Ambulance Services Academy and the Proposed Rank and File Quarters to ventilate the SKI-12 (green arrow). The wind shadow casted by Fire and Ambulance Services Academy will likely reduce the wind availability at both the project site and Hong Kong Movie City. In addition, the south-eastern end of Hong Kong Movie City is likely to be in the wind shadow of the potential housing site. The Hong Kong Movie City is expected to experience a relatively calm wind environment.

Wind flowing over the Fire and Ambulance Services Academy is expected to reattach to the ground and ventilate LOHAS Park developments (pink arrow).

Wind flowing to the east of the project site will is predicted to ventilate the developments east of Wan Po Road (purple arrow). The Beaumount is expected to reduce the wind availability downstream, in addition, the Proposed Residential Development Area 85 will likely further reduce the wind availability due to its tall proposed buildings.

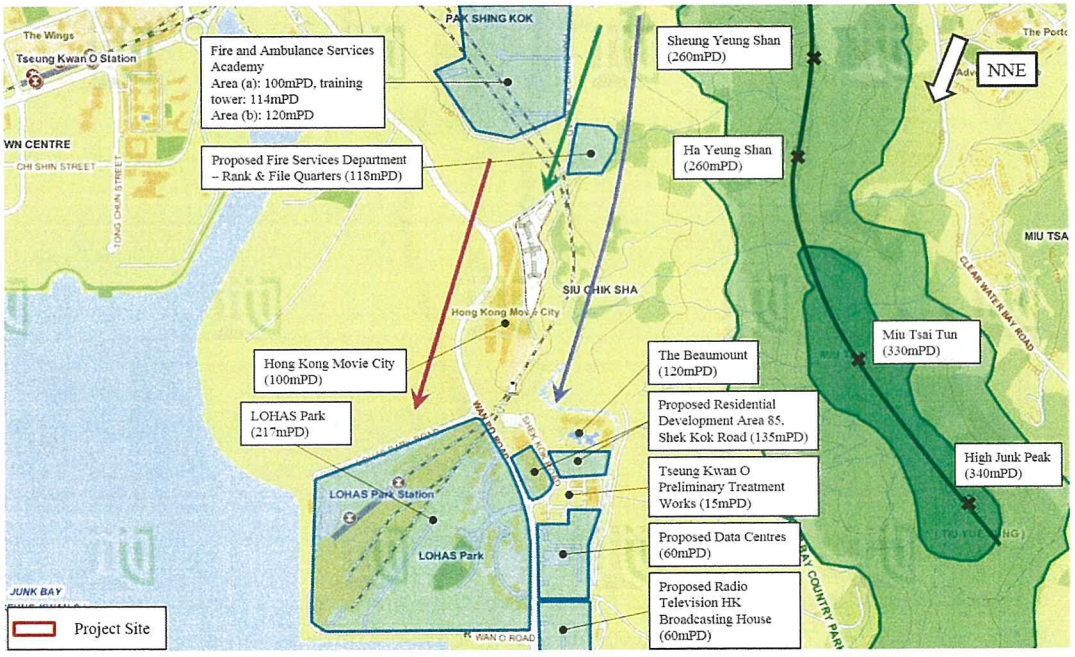


Figure 64 Future Wind Condition under NNE Wind around SKI-12

10.4.2 Under ENE/E Wind Direction

Wind flowing over the mountain range consisting of Sheung Yeung Shan, Ha Yeung Shan, Miu Tsai Tun, and High Junk Peak is expected to reattach with the ground and ventilate SKI-12.

The project site is expected to cast a wind shadow over the northern portion of Hong Kong Movie City. The open southern end of the project site will allow wind penetration through the site and thus ventilation of the southern portion of Hong Kong Movie City.

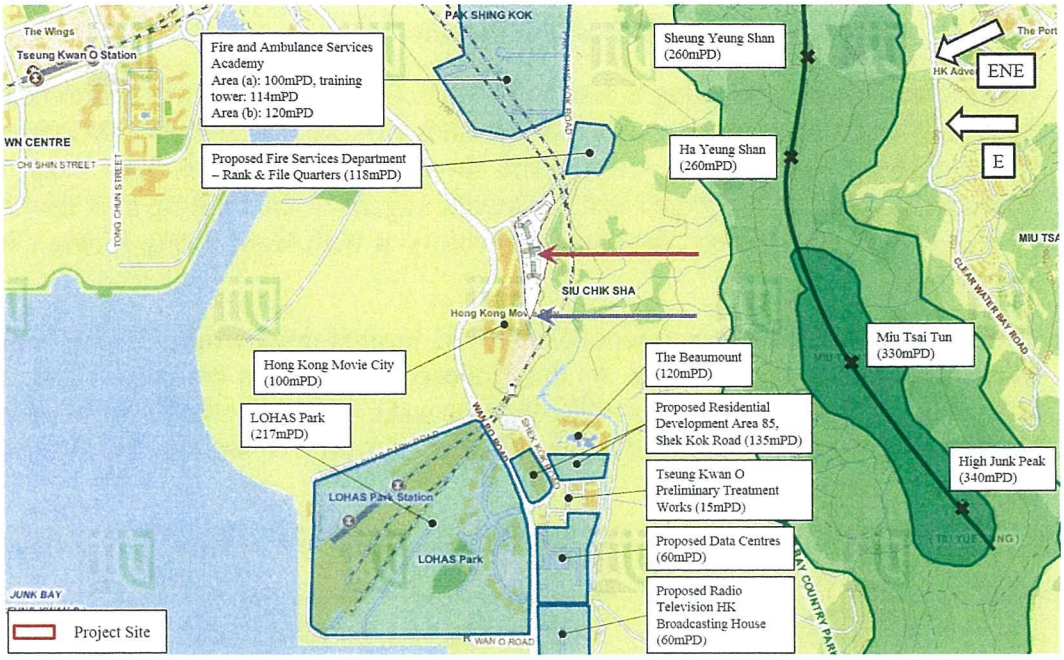


Figure 65 Future Wind Condition under ENE/E Wind around SKI-12

The two 15m wide ENE-WSW aligned building separation (dark blue dotted line in Figure 66) allows for wind penetration through the site and thus allow ventilation to sections of Hong Kong Movie City (pink arrow).

As there are no further developments downwind of Hong Kong Movie City, the SKI-12 will only affect the wind availability of Hong Kong Movie City.

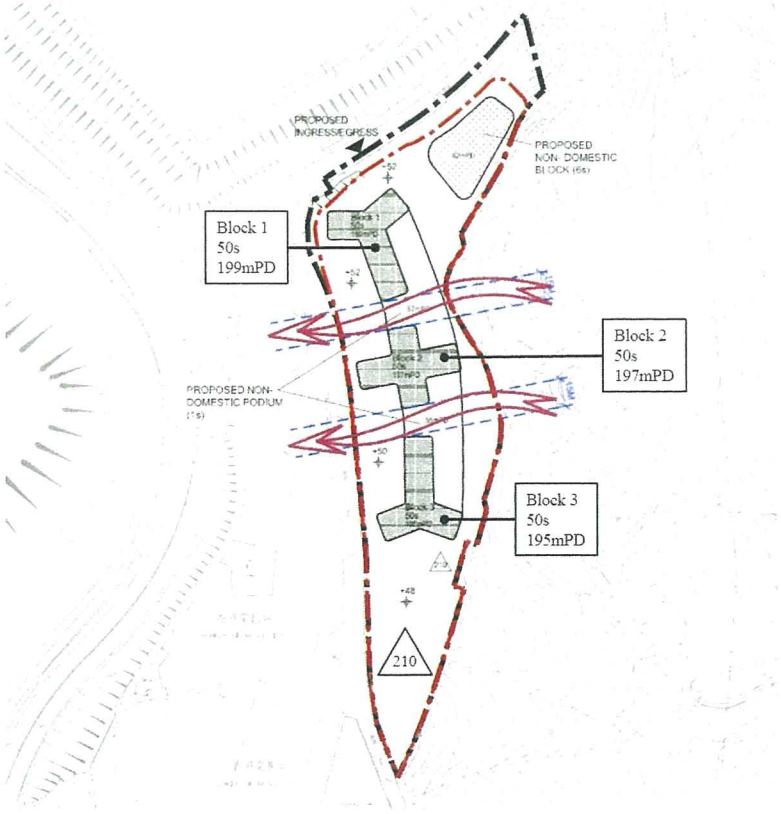


Figure 66 SKI-12 Building Separation and Air Flow for ENE/E Wind

10.4.3 Under S/SSW Wind Direction

Under the summer prevailing S and SSW wind direction, wind will travel north through Wan Po Road and possibly through Shek Kok Road to ventilate the project site and Hong Kong Movie City. Wind traveling through Shek Kok Road is expected to ventilate the project site. However, in general the built-up area upwind of SKI-12 will largely limit the wind availability at both Hong Kong Movie City and SKI-12.

The Fire and Ambulance Services Academy is located downwind of Hong Kong Movie City and the project site. As the proposed buildings at the project site are aligned in the N-S direction, this will reduce the wake region created by the building blocks, minimizing the wind shadow effect of the project site on the Fire and Ambulance Services Academy.

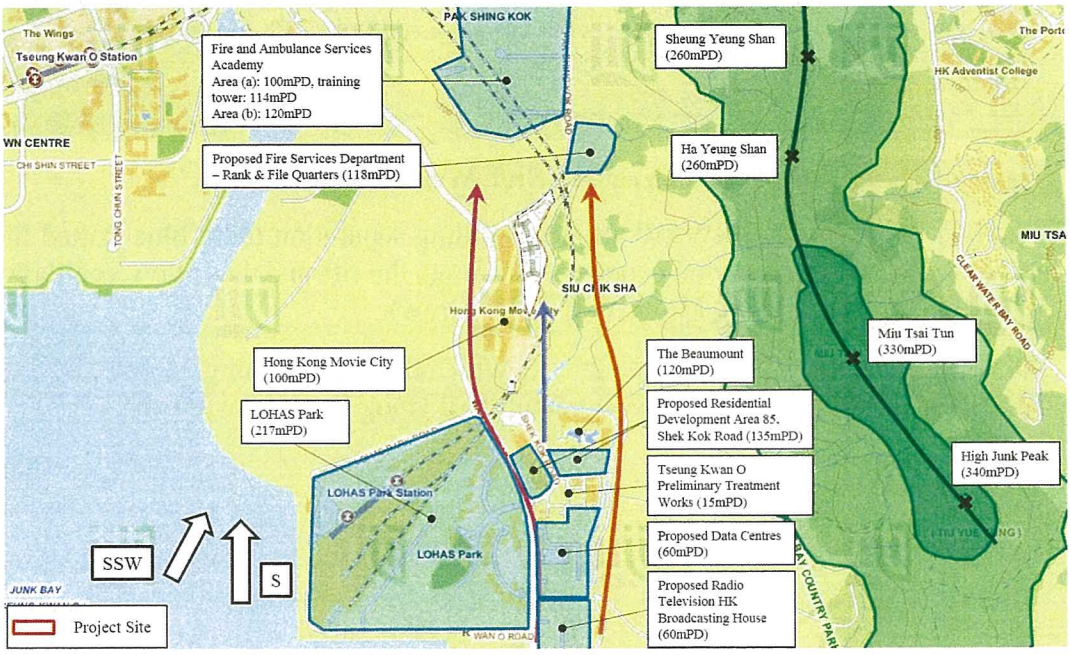


Figure 67 Future Wind Condition under S Wind around SKI-12

10.4.4 Under SW Wind Direction

Under the SW wind direction, wind will flow in unobstructed from Junk Bay. Hong Kong Movie City is predicted to experience a good wind environment under the summer months as there are no built-up area upwind of the development (orange arrow). However, the potential housing site of SKI-12 is located immediately downwind of Hong Kong Movie City. Due to the large building block of Hong Kong Movie City, it is expected that the wind environment at the project site would be relatively calm under SW wind direction for SKI-12.

Wind flowing slightly to the north of Hong Kong Movie City may be diverted slightly northwards by Block 1 and the non-domestic block, which may slightly affect the wind availability at the southern portion of the Proposed Rank & File Quarters; however, wind flowing around the north of SKI-12 is expected to ventilate the main portion of the Proposed Rank & File Quarters.

Wind flowing over Hong Kong Movie City may be obstructed by the taller domestic blocks of SKI-12. The ENE-WSW aligned 15m building gaps between the domestic blocks will allow wind penetration through the site at higher levels. As there are no developments to the leeward side of SKI-12, the development is only likely to slightly affect the Proposed Rank & File Quarters.

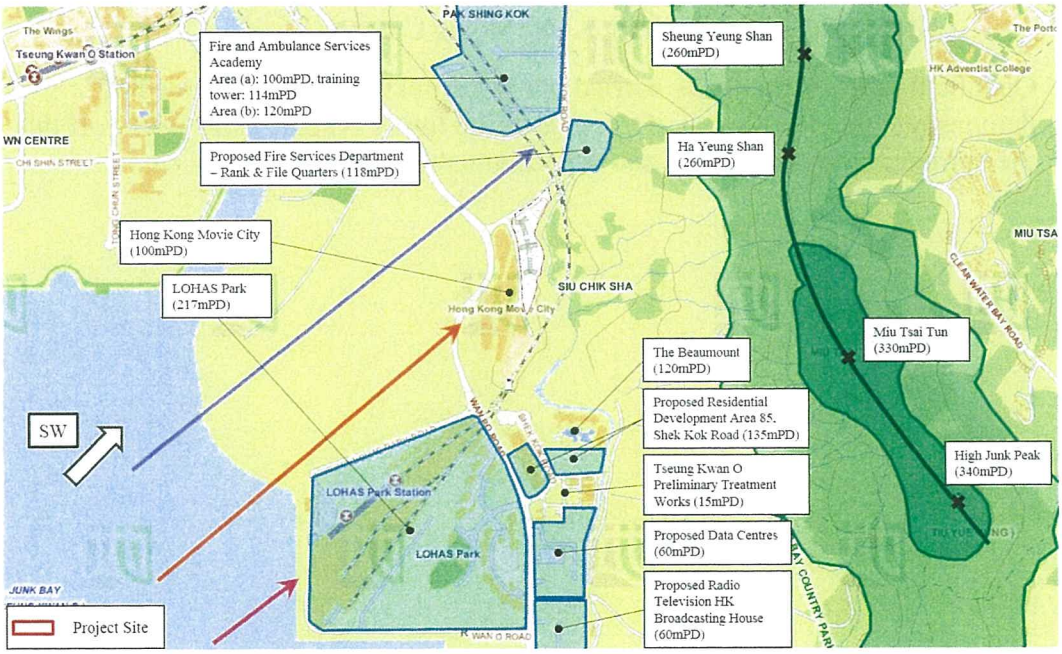


Figure 68 Future Wind Condition under SSW/SW Wind around SKI-12

10.5 Recommendation for further study

The following wind enhancement features for the project site is recommended to be implemented in future designs:

- Two 15m wide building separations aligned ENE-WSW should be incorporated allowing the ENE/E winds to enter Hong Kong Movie City.
- The open space at the southern portion of the site is an effective mitigation measure by facilitating ENE/E winds to penetrate through the site and ventilating Hong Kong Movie City, this feature should be maintained at the next stage of the Project subject to no unforeseeable ground conditions and geotechnical/engineering difficulties which might affect the disposition of building blocks.
- Further enhancement features should be considered at the next stage of the Project to maximize the separation between the non-domestic block and the domestic block at the northern portion of the site to enhance NNE wind penetration.
- Low level permeability should be considered to be increased at and around Block 1 at the next stage of the Project to enhance the wind penetration of NNE winds towards Hong Kong Movie City.

Quantitative AVA should be carried out at the next stage of the Project to demonstrate that the wind performance of the future scheme is no worse off than the current conceptual layout and for scheme design optimization.

11 Further Recommended Design Principles for Scheme Optimization

Further to the site specific wind enhancement features recommended in the above sections, the following section contains general recommendations for consideration at the next stage of the Project for all sites as the prevailing effort for improvement in urban climate.

- Building Permeability equivalent to 20% to 33.3% of total front area;
- Minimization of podium bulk with ground coverage of no more than 65%;
- Building setback;
- Greenery coverage of at least 20% and an overall target of 30% is aimed to be achieved;
- Avoid long continuous facades; and
- Reference could also be made to recommendations of design measures in the Hong Kong Planning Standards and Guideline.

The designer shall incorporate the mentioned recommendations and relevant urban design features under APP-152 as far as possible at the next stage of the Project.

12 Conclusion

The report provides the expert evaluation on the AVA of the conceptual layouts for the 4 potential housing sites in the vicinity of Tseung Kwan O. It is a qualitative assessment of wind performance of the site under existing condition and the conceptual layout. A preliminary assessment on site characteristic and wind availability is conducted. The expert evaluation indicates that:

For existing condition at SKI-1

- The annual prevailing winds will be dominated by the surrounding mountains.
- Summer winds will provide good ventilation at and around the project site.

For conceptual layout of SKI-1

- Wind shadow may be casted by the building blocks, which may affect wind availability at Tseung Kwan O Upper Village under the annual prevailing N wind.
- Building separation of 15m wide aligned NNE-SSW is implemented to improve wind penetration through site.
- No developments are located to the north of the project site, thus the project site will have no significant impact to the surroundings under summer winds.

- Further enhancement features at Block 2's pedestrian level should be considered at the next stage of the Project to enhance the pedestrian level permeability around Block 2 to allow for N/NNE wind to ventilate Tseung Kwan O Upper Village.

For existing condition at SKI-2

- The project site is located inside a valley, where the annual prevailing winds will be largely affected by the topography.
- Calm wind environment is expected under annual prevailing wind conditions.
- Southerly summer winds flowing over built-up area of Hang Hau will ventilate the site.
- Duckling Hill may obstruct incoming SSW/SW wind, resulting in calmer wind environment at the open ground of SKI-2.

For conceptual layout of SKI-2

- Non-domestic block may obstruct wind flowing down from mountain and affect the western portion of Clear Water Bay Film Studio under NNE wind condition.
- 15m building separation aligned in NNE-SSW direction facilitates wind penetration through the site and allow ventilation into Ying Yip Road under NNE wind condition.
- Domestic blocks aligned in NNE-SSW direction, reducing building frontage to NNE wind, and thus reducing wake region.
- Under ENE, E, S, and SW wind condition, SKI-2 will have no impact to surrounding developments as no surrounding developments are located downwind of SKI-2.

For existing condition at SKI-11

- The mountain to the north may affect the wind environment under N and NNE wind directions.
- ENE and E wind will provide good ventilation at the project site.
- Summer winds of S, SSW, and SW wind will be obstructed by the high-rise clusters of Po Lam.

For conceptual layout of SKI-11

- N-S 15m building separation will reduce the wind shadowing effect of the potential housing site to the downwind residential developments. Will also allow wind toe enter Po Fung Road and Po Lam Road North.
- E-W 15m building separation will reduce the wind shadowing effect on Ying Ming Court.
- Podium may reduce wind availability of the immediate surrounding's pedestrian level.
- Further enhancement features should be considered at the next stage of the Project, e.g. void between tower and podium, to further alleviate the potential impacts on the surrounding wind environment induced by the proposed development.

For existing condition at SKI-12

- Wind flowing over the mountain ridge will ventilate the open ground of SKI-12.
- SW wind will be largely obstructed by Hong Kong Movie City.
- S and SSW wind will be largely obstructed by LOHAS Park and the neighbouring developments including Proposed Data Centres, Proposed Residential Development Area 85, and The Beaumount.
- Wind flowing from the NNE may be obstructed by the proposed Fire Services Department's development. Wind flowing through Pak Shing Kok Road may be able to ventilate SKI-12.

For conceptual layout of SKI-12

- Under NNE, ENE, and E wind condition, the domestic blocks may obstruct wind from ventilating Hong Kong Movie City.
- Two ENE-WSW building separation of 15m wide will allow wind penetration through the site under ENE and E wind conditions to ventilate Hong Kong Movie City.
- The open space at the southern portion of the site facilitates ENE/E winds to penetrate through the site to ventilate Hong Kong Movie City.
- Domestic blocks aligned N-S direction, reducing building frontage to incoming S wind, thus minimizing the wind shadow effect of the project site on the Fire and Ambulance Services Academy.
- Under SW wind, the incoming wind will be slightly diverted northwards by Block 1 and non-domestic block, slightly affecting the Proposed Rank & File Quarters' southern portion, but wind flowing to the north of the project site will ventilate the majority of the Proposed Rank & File Quarters.

- Low level permeability should be considered to be increased at the next stage of the Project to enhance the wind penetration of NNE winds towards Hong Kong Movie City.

The future housing sites may affect downwind developments' wind availability. Some mitigation measures have already been implemented into the conceptual layouts, and they are recommended to be kept. Further mitigation measures have been recommended to further enhance wind penetration through the site and thus enhance the ventilation performance of possible problem areas.

Further recommended design principles for scheme optimization have been presented in Section 11. These are general recommendations for consideration at next stage of the Project for all sites as the prevailing effort for improvement in urban climate.

The development will not pose significant adverse impact to the surrounding environment in terms of air ventilation. An AVA Initial Study is recommended to be conducted individually at the next stage of the Project for the potential housing sites in accordance with the "Technical Circular No. 1/06 – Air Ventilation Assessments" (Technical Circular) and Annex A to the Technical Circular "Technical Guide for Air Ventilation Assessment for Developments in Hong Kong" (Technical Guide) jointly issued by Housing, Planning and Lands Bureau and Environment, Transport and Works Bureau on 19th July 2006. This is to allow for scheme design optimization during future design stages and/or to prove that the future scheme would perform no worse than the current conceptual layout in ventilation performance.

Air ventilation performance of the proposed public housing development at SKI-6 – south of Chiu Shun Road

Prevailing wind directions

According to the RAMS data at grid [x:099, y:041], the annual prevailing winds of the subject site are E, ENE and NNE, while the summer prevailing winds are SSW, SW, S and E. The relevant wind roses are attached at Appendix A for easy reference.

Proposed development

According to the indicative scheme layout, the proposed public housing development at the subject site is a single domestic tower at a maximum building height of 130mPD on a proposed low-rise non-domestic podium at a maximum plot ratio of 0.5.

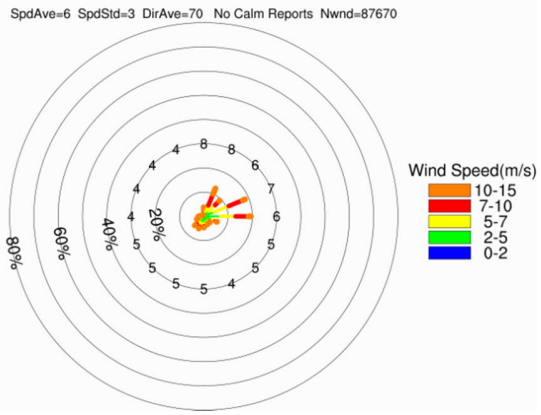
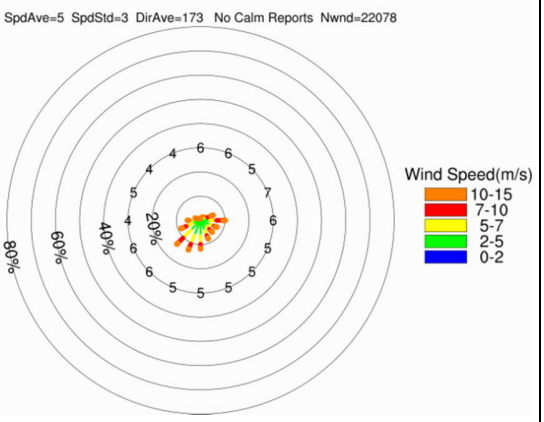
Existing wind condition

Under the NNE, SSW and SW conditions, Chiu Shun Road of more than 15m wide would act as an effective wind corridor for wind penetration through the area. The prevailing E and ENE winds would flow from the hilly terrain of Pak Shing Kok and reach Ngan O Road after penetrating the subject site. Similarly, the S wind from the hilly terrain of Pak Shing Kok will penetrate through the subject site and enter Chiu Shun Road.

Wind condition with Proposed Development

The proposed development would not affect the width of Chiu Shun Road and the ventilation performance of Chiu Shun Road as a wind corridor under NNE, SSW and SW winds would not be affected by the proposal. While some localized impact on the immediate vicinity of the proposed development is expected under E, ENE and S winds, it is not anticipated that the proposal, with only a single domestic tower and a relatively small and low–rise podium allowing prevailing wind to skim over, would impose significant impact on the overall pedestrian wind environment.

Appendix A

Annual @200m	Summer@200m
/disk/rdisk07/ramspj/nudge_all/postproc/hkgplots/f_01510_lev200 SpdAve=6 SpdStd=3 DirAve=70 No Calm Reports Nwnd=87670 	/disk/rdisk07/ramspj/nudge_all/postproc/hkgJJAplots/f_01510_lev200 SpdAve=5 SpdStd=3 DirAve=173 No Calm Reports Nwnd=22078 

土木工程拓展署
Civil Engineering and Development Department

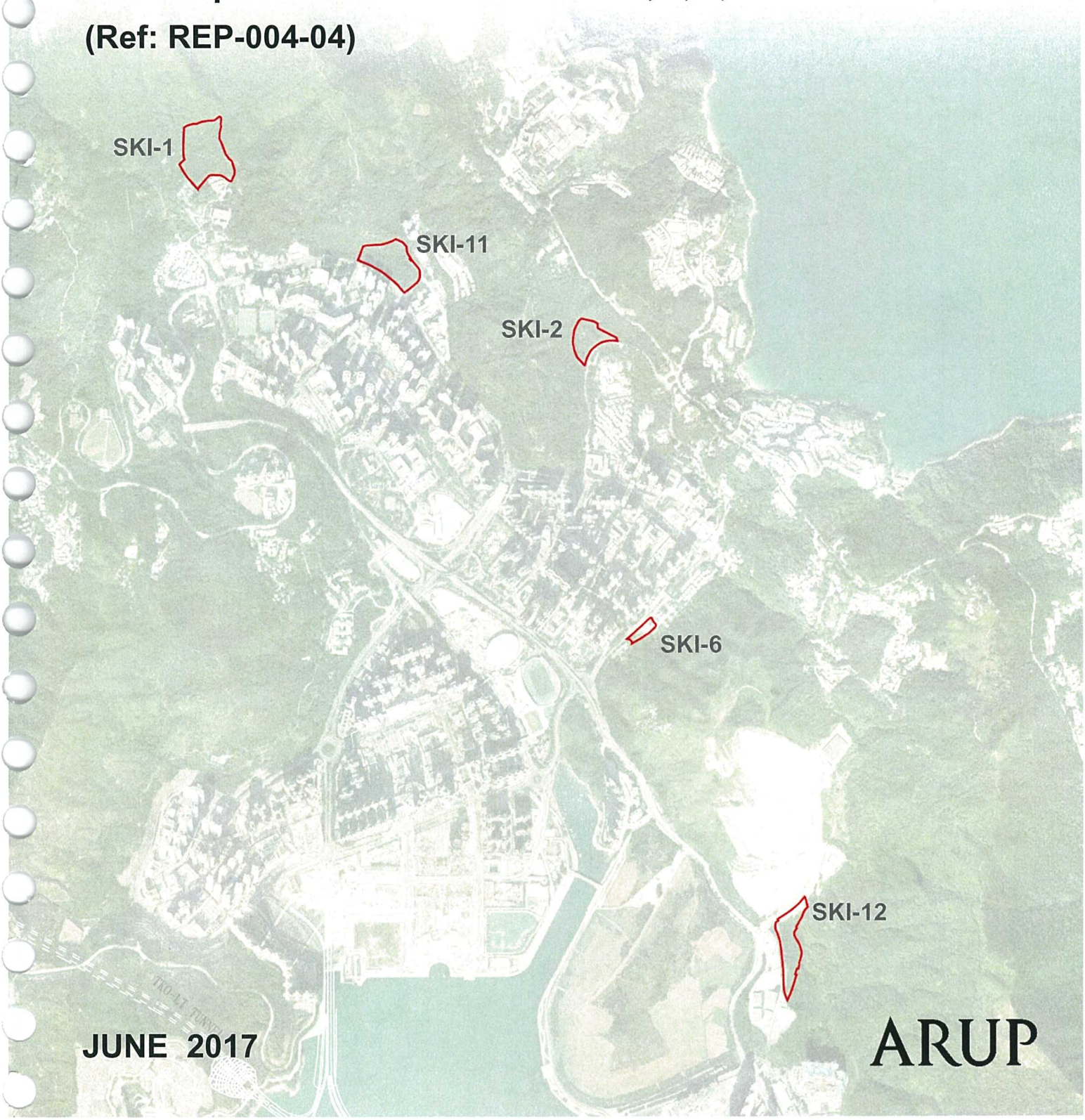
Appendix X of
RNTPC Paper No. 6/17

New Territories East
Development Office

Agreement No. NTE/10/2015
Landscape Assessment for Potential Housing Sites in the vicinity of Tseung Kwan O – Feasibility Study

Landscape Assessment at Site SKI-1, 2, 6, 11 and 12

(Ref: REP-004-04)



JUNE 2017

ARUP

Civil Engineering and Development Department

Agreement No. NTE/10/2015 Landscape Assessment for Potential Housing Sites in the vicinity of Tseung Kwan O – Feasibility Study

Landscape Assessment at Site SKI-1-2-6-11-12

247326-REP-004-04

Rev.4 | 27 June 2017

This report takes into account the particular instructions and requirements of our client.
It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

Job number 247326

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		Signature			
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		Name	Various	Eva Lam	Fergal Whyte
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Tree Survey Plan with Landscape Baseline

Appendix B

Not Used

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Typical Landscape Treatment on Slope

Appendix C3

Typical Landscape Treatment to Natural Terrain Hazard Mitigation Barrier

Appendix C4

Greening Measures within Housing Site

Appendix C5

Visual Illustration of Green Channels

Appendix D

Proposed Woodland Compensatory Area

1 INTRODUCTION

1.1 Background

1.1.1 CEDD commissioned Arup on 28 January 2015 to undertake 'Agreement No. CE 61/2014(CE) – Site Formation and Infrastructural Works for Nine Housing Sites in Tseung Kwan O – Feasibility Study'.

1.1.2 The 9 potential housing sites are scattered in Tseung Kwan O (TKO). These sites are mainly zoned "Green Belt" with minor portion of "G/IC" under the current Outline Zoning Plan. In consideration of various technical aspects and anticipated programme effect, amongst the 9 potential housing sites in TKO, the following 5 housing sites have the potential to provide about 11,260 number of flats as the first development package. On the basis of the findings of the Assignment, no insurmountable technical problems are anticipated for development of these 5 potential housing sites:

(1) Site SKI-1, North of Tseung Kwan O Village;
(2) Site SKI-2, Northwest of Ying Yip Road;
(3) Site SKI-6, South of Chiu Shun Road;
(4) Site SKI-11, West of Yau Yue Wan Village; and
(5) Site SKI-12, East of Movie City.

1.1.3 On the other hand, a further study on the following 4 potential housing sites in TKO is recommended:

(1) Site SKI-3, West of Tsui Lam Estate;
(2) Site SKI-4, Bus Terminus, South of Hong Sing Garden and North of Mau Wu Tsai;
(3) Site SKI-5, North of Po Lam Road South; and
(4) Site SKI-13, South of Po Lam Road.

1.1.4 As per instruction from CEDD, Arup consolidated the findings of the Assignment and prepare technical reports for rezoning of the 5 Sites SKI-1, 2, 6, 11 and 12.

1.2 Introduction

1.2.1 Ove Arup and Partners Hong Kong Limited (Arup) was commissioned by CEDD to undertake Agreement No. NTE/10/2015 – Landscape Assessment for Potential Housing Sites in the vicinity of Tseung Kwan O – Feasibility Study on 6 January 2016. This report serves as the landscape assessment report for the5 Sites SKI-1, 2, 6, 11 and 12.

1.3 Nomenclature and Abbreviations

1.3.1 The following abbreviations are used throughout this report, unless otherwise stated:

AFCD	Agriculture, Fisheries and Conservation Department, HKSARG
ArchSD	Architectural Services Department, HKSARG
Arup	Ove Arup & Partners Hong Kong Limited
CEDD	Civil Engineering and Development Department, HKSARG
CEDD TC	Civil Engineering and Development Department Technical Circular
DBH	Diameter at Breast Height
DEVB	Development Bureau, HKSARG
DEVB TC(W)	Development Bureau Technical Circular (Works)
DIA	Drainage Impact Assessment
DLO	District Lands Office, LandsD
DR	Drainage Reserve

DSD	Drainage Services Department, HKSARG
E&M	Electrical and Mechanical
EEF	Energy Efficient Features
EIA	Environmental Impact Assessment
EIAO	Environmental Impact Assessment Ordinance
EM&A	Environmental Monitoring and Audit
EPD	Environmental Protection Department, HKSARG
ETWB TC(W)	Environment, Transport and Works Bureau Technical Circular (Works)
GEO	Geotechnical Engineering Office, CEDD
GI	Ground Investigation
GIU	Geotechnical Information Unit
GLA	Government Land Allocation
GLTMS	Greening, Landscape and Tree Management Section, DEVB
HD	Housing Department, HKSARG
HKPSG	Hong Kong Planning Standard and Guidelines
HKSAR	Hong Kong Special Administrative Region
HKSARG	Government of HKSAR
HyD	Highways Department, HKSARG
LA	Landscape Assessment
LandsD	Lands Department, HKSARG
LCA	Landscape Character Area
LCSD	Leisure and Cultural Services Department, HKSARG
LR	Landscape Resource
LT	Laboratory Testing
LVIA	Landscape and Visual Impact Assessment
NTHS	Natural Terrain Hazard Study
O&M	Operation and maintenance
OZP	Outline Zoning Plan
PAH	Project Administration Handbook for Civil Engineering Works
PER	Preliminary Environmental Review
PlanD	Planning Department, HKSARG
RET	Renewable Energy Technologies
RPE(G)	Registered Professional Engineer (Geotechnical)
SIA	Sewerage Impact Assessment
TC	Technical Circular
TGLA	Temporary Government Land Allocation
TIA	Traffic Impact Assessment
TM	Technical Memorandum
TPB	Town Planning Board
TPDM	Traffic Planning and Design Manual
TTA	Temporary Traffic Arrangement
WBTC	Works Branch Technical Circular
WSD	Water Supplies Department, HKSARG

2 ENVIRONMENTAL LEGISLATION AND STANDARDS

2.1 Legislation, Standards and Guidelines

2.1.1 In preparation of this report, reference has been made to the following technical circulars, practice notes and publications:

- Landscape and Visual Assessment associated with the construction and operation of the Project;
- CEDD TC No. 06/2014 - Vetting Committee on Slope Appearance;
- DEVB TC(W) No. 2/2012 - Allocation of Space for Quality Greening on Roads;
- DEVB TC(W) No. 3/2012 - Site Coverage of Greenery for Government Building Projects;
- DEVB TCW No. 7/2015 - Tree Preservation;
- DEVB TCW No. 6/2015 - Maintenance of Vegetation and Hard Landscape Features;
- DSD PN No. 1/2005 - Guidelines on Environmental and Ecological Considerations for River Channel Design;
- Environmental Impact Assessment Ordinance (Cap. 499. S. 16) and Technical Memorandum on Environmental Impact Assessment Process, particularly Annexes 10 and 18 published by Hong Kong Environmental Protection Department, The Government of the Hong Kong Special Administrative Region in 1997;
- EIAO Guidance Note No. 8/2010 - Preparation of Landscape and Visual Impact Assessment Under the Environmental Impact Assessment Ordinance;
- GEO Publication No. 1/2011 - Technical Guidelines on Landscaping Treatment for Slopes;
- WBTC TC No. 17/2000 - Improvement to the Appearance of Slopes in Connection with ET WBTC 25/93;
- ETWB TCW No. 11/2004 - Cyber Manual for Greening;
- ETWB TCW No. 29/2004 - Registration of Old and Valuable Trees, and Guidelines for their Preservation;
- ETWB TCW No. 34/2003 - Community Involvement in Greening Works;
- Forests and Countryside Ordinance (Cap. 96);
- Guidelines on Tree Preservation during Development published by Greening, Landscape and Tree Management Section, Development Bureau, The Government of the Hong Kong Special Administrative Region in 2015;
- Guidelines on Tree Transplanting published by Greening, Landscape and Tree Management Section, Development Bureau, The Government of the Hong Kong Special Administrative Region in 2014;
- Hong Kong Planning Standards and Guidelines particularly Chapter 4, 10, 11 and 12 published by Planning Department, The Government of the Hong Kong Special Administrative Region in 2015;
- Landscape Value Mapping of Hong Kong published by Planning Department, The Government of the Hong Kong Special Administrative Region in 2005;
- Town Planning Ordinance (Cap. 131);
- Urban Design Guidelines for Hong Kong published by Planning Department, The Government of the Hong Kong Special Administrative Region in 2013;
- ETWB TCW No. 36/2004 - The Advisory Committee on the Appearance of Bridges and Associated Structures (ACABAS);

- Greening - Green Infrastructure published by Development Bureau, The Government of the Hong Kong Special Administrative Region in 2016: http://www.greening.gov.hk/en/green_technologies/green_infrastructure.html;
- Greening - Greening and Landscape Treatment on Slopes published by Development Bureau, The Government of the Hong Kong Special Administrative Region in 2016: http://www.greening.gov.hk/en/departments_greening_efforts/treatment_slopes.htmland
- Greening - Tree Maintenance published by Development Bureau, The Government of the Hong Kong Special Administrative Region in 2016: http://www.greening.gov.hk/en/tree_care/tree_maintenance.html.

2.2 Relevant Outline Zoning Plan of Vicinity

2.2.1 A review has been undertaken of the current goals and objectives, statutory land-use and landscape planning designations for the study area. These have drawn upon information based up the Outline Zoning Plans.

- Approved Tseung Kwan O Outline Zoning Plan No – S/TKO/24 (14 March 2017)
- Approved Kwun Tong (North) Outline Zoning Plan No - S/K14N/15 (15 January 2016)
- Approved Clear Water Bay Peninsula North Outline Zoning Plan No – S/SK-CWBN/6 (13 December 2013)
- Approved Tseng Lan Shue Outline Zoning Plan No –S/SK-TLS/8 (24 March 2006)

3 ASSESSMENT METHODOLOGY

3.1.1 Landscape impacts have been assessed separately for the construction and operation stages.

3.1.2 The assessment of landscape impacts has involved the following procedures:

- ***Identification of the baseline landscape resources and landscape character areas found within the study area.*** This is achieved by site visit and desktop study of topographical maps, information databases and photographs, as well as Landscape Value Mapping of Hong Kong.
- ***Assessment of the degree of sensitivity of the landscape resources and landscape character areas and the classification (rating) of sensitivity and each landscape resources and landscape character area.*** This is influenced by a number of factors including:
  - quality and maturity of landscape resources / characters;
  - importance and rarity of special landscape elements;
  - whether the landscape resources are considered to be of local, regional, national or global importance;
  - whether there are any statutory or regulatory limitations/requirements relating to the landscape resources/characters; and
  - ability of the landscape resources/characters to accommodate change.

3.1.3 The sensitivity of each landscape resource and character area is classified as follows:

High:	Important landscape or landscape resource of particularly distinctive character or high importance, sensitive to relatively small changes.
Medium:	Landscape or landscape resource of moderately valued landscape characteristics reasonably tolerant to change.
Low:	Relatively unimportant Landscape or landscape resource of low valued landscape characteristics highly tolerant to change.

- ***Identification of potential sources of landscape impacts during construction and operation stages.*** These are the various elements of the construction works and operation procedures that would generate landscape impacts.
- ***Identification of the magnitude of change and the classification (rating) of the magnitude of change for all landscape resources and landscape character areas.*** The magnitude of the impact (or magnitude of change) depends on a number of factors including:
  - scale of development;
  - compatibility of the project with the surrounding landscape;

- duration of impacts, i.e. whether it is temporary (short, medium or long term), under construction and operation stages; and
- reversibility of change.

3.1.4 The magnitude of landscape impacts is classified as follows:

Large:	The landscape or landscape resource would suffer major change. (beneficial or adverse)
Intermediate:	The landscape or landscape resource would suffer moderate change. (beneficial or adverse)
Small:	The landscape or landscape resource would suffer slight or barely perceptible change. (beneficial or adverse)
Negligible:	The landscape or landscape resource would suffer no discernible change.

- ***Significant threshold of potential landscape impact (before mitigation) during construction and operation.*** By synthesising the magnitude of the various impacts and the sensitivity of the various landscape resources it is possible to categorise impacts in a logical, well-reasoned and consistent fashion. **Table 3.1** shows the rationale for dividing the degree of significance into four thresholds, namely insubstantial, slight, moderate, and substantial, depending on the combination of a negligible-small-intermediate-large magnitude of impact and a low-medium-high degree of sensitivity of landscape resource/character.

Table 3.1: Relationship between Landscape Sensitivity and Impact Magnitude in Defining Impact Significance

Magnitude of Impact (Both beneficial and adverse impact are assessed)	Large	**Moderate**	**Moderate / Substantial**	**Substantial**
	Intermediate	**Slight / Moderate**	**Moderate**	**Moderate / Substantial**
	Small	**Slight**	**Slight / Moderate**	**Moderate**
	Negligible	**Insubstantial**	**Insubstantial**	**Insubstantial**
		Low	Medium	High
		Sensitivity of Landscape Resource, Landscape Character Area		

- ***Identification of potential landscape mitigation measures.*** Mitigation measures may take the form of
  - adopting alternative design or revisions to the basic engineering or architectural design to prevent and/or minimize adverse impacts;

- remedial measures such as colour and textural treatment of physical, engineering and building features; and
- compensatory measures such as the implementation of landscape design measures (e.g. tree planting, creation of new open space etc.) to compensate for unavoidable adverse impacts and to attempt to generate potentially beneficial long term impacts.

3.1.5 A programme for the mitigation measures is provided and discussed in **Section 7**.

- ***Significant threshold of residual impact after the implementation of the mitigation measures during Construction and Operation: Day 1 and Year 10.*** The level of residual impact is derived from the magnitude of change which the proposed works will cause to the existing landscape resources or landscape character areas and the ability of the LRs and LCAs to tolerate change, i.e. the quality and sensitivity of the LRs and LCAs, taking into account the beneficial effects of the proposed mitigation measures. The significance threshold is derived from the matrix shown in **Table 3.1**.
- ***Prediction of Acceptability of Impacts.*** An overall assessment of the acceptability, or otherwise, of the impacts according to the five criteria as below:

Beneficial	The proposed works will complement the landscape resource and landscape character of its setting, follow the relevant planning objectives, and improve overall and landscape quality.
Acceptable	There will be no significant effects on the landscape, no significant landscape effects, and no interference with the key views due to the proposed works.
Acceptable with Mitigation Measures	There will be some adverse effects due to the proposed works, but the adverse effects can be eliminated, reduced or offset to a large extent by the proposed mitigation measures.
Unacceptable	There will be the adverse effects that are considered too excessive and are unable to mitigate practically.
Undetermined	Significant adverse effects are likely, but the extent to which they may occur or may be mitigated cannot be determined from the study. Further detailed study will be required for the specific effects in question.

3.1.6 Mitigation measures proposed in this report are considered practical and achievable. The agencies for the funding and implementation (and subsequent maintenance, if applicable) are to be confirmed at the next stage of the project according to the principles in DEVB TCW No. 7/2015.

4 SCOPE AND CONTENT OF THE STUDY

4.1 Limits of the landscape Assessment Area

4.1.1 The landscape assessment area will include all areas within 500m from the study area as indicated in **Figure 1.1.1., Figure 1.2.1-1.2.7**. (Refer to Figure 1.2.1 – 1.2.7 for the extent of the assessment area). The affected area is the potential affected area for the site formation works and the associated infrastructure works for the public housing site in SKI-1, 2, 6, 11 and 12 (Refer to Figure 1.2.1 – 1.2.7 for the extent of the affected area). If landscape resources at distance of about 500 m are identified to be affected by the construction and operation of the project, the assessment area will be expanded to include LRs further outside the proposed works area.

Review of Planning and Development Control Framework

4.1.2 The Outline Zoning Plan gazetted under the Town Planning Ordinance provides the statutory framework for land use development. Reference has been made to the OZPs No. S/TKO/24 - Tseung Kwan O Outline Zoning Plan (approved on 24 March 2017). The study areas are mostly zoned as "Green Belt" (GB); except Site SKI-6 is mixed-use zone of GB and "Government, Institution or Community" (GIC), Therefore rezoning of OZP will be required for housing development. The proposed development as overlaid on the affected OZP is shown in **Figure 4.1.1** and their tentative parameters are shown in **Table 4.1** below:

Table 4.1: Basic Parameters of the Five Housing Sites

Site No.	Address	Current Zoning of Potential Housing Sites	Approx. Area* (ha)	Proposed Zoning	Study Area* (ha)	Max. Building Height +mPD	No. of Blocks	No. of Storeys
SKI-1	North of Tseung Kwan O Village	GB	3.94	R(A)	4.87	180	4	37-40
SKI-2	Northwest of Ying Yip Road	GB	1.48	R(A)	6.14	170	2	40
SKI-6	South of Chiu Shun Road	GB,GIC	0.42	R(A)	0.45	130	1	40
SKI-11	West of Yau Yue Wan Village	GB	2.91	R(A)	3.18	140	4	38-40
SKI-12	East of Hong Kong Movie City, Sui Chik Sha	GB	2.25	R(A)	2.37	210	3	50

Notes:

Please refer to Table 2.1, under Final Report (Five TKO Sites) under report ref. 081

* Excluding area for proposed infrastructural works associated with the housing sites

** For technical assessments only and are subject to change pending further study and design at next stage

4.1.3 The greening ratio for all housing sites will comply with DEVB TC(W) No. 3/2012 - Site Coverage of Greenery for Government Building Projects. Green coverage will comply with the Guiding Principles on Green Coverage for Public Housing Development (PlanD/HD). Open space provision will follow Hong Kong Planning Standards and Guidelines.

4.2 Review of Planning Principles and Concepts

4.2.1 Study on South East New Territories Development Strategy are reviewed and considered. The objective is to review the overall planning strategy of South East New Territories included Tseung Kwan O District, to ensure the planned master urban design plan will not be affected.

4.2.2 There are several urban design principles that have been proposed within the OZP/ODP in the study, namely, the provision of breezeways, a stepped height profile, a commercial spine, civic node, landmark buildings, etc. These have been provided for in the planning of the new development areas in the Further Development of Tseung Kwan O Feasibility Study under Agreement No. CE 87/2001 (CE). The proposed wide north-south breezeways which assist in improving ventilation within the hinterland areas have been maintained and not affected by proposed housing blocks within sites development. Further, the proposed major view corridor as identified in the master urban design plan would be maintained and will not be affected by the proposed housing sites.

4.2.3 The proposed site formation works and the associated infrastructure works will inevitably conflict with the land use planning intentions for the study areas as designated as Green Belt (refer to **Table 4.1**).

4.2.4 It is considered that the proposed housing site development and associated infrastructure works would be generally in compliance with the Urban Design principle as set out in the master urban design plan.

5 BASELINE RESOURCES

5.1 Physical Landscape Resources

5.1.1 The area for the landscape assessment will include all areas within 500 m Assessment Area from the site boundary as indicated in **Figure 5.1.1 to 5.1.7**. If landscape resources at distance of about 500 m are identified to be affected by the construction and operation of the project, the assessment area will be expanded to include LRs further outside the proposed area.

5.1.2 The baseline landscape resources that will be affected during the construction stage and operation stage, together with their sensitivity, are described in **Table 5.1 to 5.7**. The locations of baseline landscape resources are mapped in **Figure 5.1.1 to 5.1.7**. Photo views illustrating the landscape resources within the study area are illustrated in **Figure 5.2.1 to 5.2.7**. For the ease of reference and co-ordination between text, tables and figures, each landscape resource is given an identity number.

5.1.3 The Project has been divided into broad units of similar landscape character based on a process of landscape characterisation which draws on the information gathered in the desktop study and site surveys. Further, the identification of the LCA makes reference to the *Landscape Value Mapping of Hong Kong (December 2005).*

5.2 Landscape Character Areas

5.2.1 Landscape character areas have been identified within the study area in accordance with the study on Landscape Value Mapping of Hong Kong. These are described in **Table 5.1 to 5.7** and illustrated in **Figure 5.3.1 to 5.3.7**. Photo views illustrating the landscape character areas within the study area are illustrated in **Figure 5.4.1 to 5.4.7**.

Table 5.1: Landscape Resources / Landscape Character Areas and Their Sensitivity at Site SKI-1

ID. No.	Landscape Resources / Landscape Character Areas	Sensitivity (Low, Medium or High)
LR1.1	**Woodland** The woodland located on natural hillside includes Razor Hill and Tai Ngau Wu. There are approximately **43,550 nos.** of trees and **60.84 ha** within 500 m Assessment Area. There is approximately **1760 nos.** of trees and **2.26 ha** within the Study Area. This LR covers a part of Little Hawaii Trail on Razor Hill. This woodland located on the southern half of the Site SKI-1 and immediately to the north of Tseung Kwan O Village is mixed with lower density of younger plantation trees. The overstorey of this LR is dominated by younger plantation tree including *Acacia auriculiformis* and *Acacia mangium* as well as young to middle-aged native tree species including *Machilus pauhoi, Mallotus paniculatus* and *Schefflera heptaphylla*. This LR extends into the assessment area and shares similar floristic structure and composition to those within the affected site area at SKI-1 which is dominated by native woodland common species including tree *Aporusa dioica, Machilus chekiangensis, Macaranga tanarius* var. *tomentosa, Mallotus paniculatus, Schefflera heptaphylla* and *Sterculia lanceolata* in the overstorey. The understory is dominated by shrub *Alangium chinense, Diplospora dubia,*	**High**

ID. No.	Landscape Resources / Landscape Character Areas	Sensitivity (Low, Medium or High)
	Embelia laeta, Litsea rotundifolia var. *oblongifolia, Microcos nervosa* as well as herb *Lophatherum gracile, Cyclosorus parasiticus* and *Lygodium japonicum*. Those vegetation are generally in fair health condition. Some rare and precious plant species including shrubs, climbers and seedlings of trees are identified in this LR which are recorded in **LR1.9 Important Trees & Rare and Precious Species**. The woodland is local significant and high quality. Those woodland trees have a low suitability of transplanting. The quality and significant of this LR are high with relatively little tolerance to accommodate change. The sensitivity of this LR is considered to be **high**.	
LR1.2	**Shrubland / Grassland** This LR refers to the shrubland / grassland on the upland hillside which extends continuously through the hilltop of Tai Ngau Wu. This LR is approximately 7.13 ha. This LR is not located within Study Area. This LR is generally surrounded by woodland, which occurs at a lower altitude. This LR is dominated by common shrub including *Rhodomyrtus tomentosa, Eurya nitida, Embelia laeta, Rhaphiolepis indica* and *Melastoma sanguineum* as well as herb *Dicranopteris pedata, Miscanthus floridulus, Lygodium japonicum and Ischaemum barbatum*. A few of tree species including *Schefflera heptaphylla, Cratoxylum cochinchinense* and *Aporusa dioica* are found in this LR. The shrubland / grassland is common, and local significant. The landscape amenity and quality are moderate with reasonable tolerance to change. Those vegetation are generally in middle-aged and fair health condition. Therefore, the overall sensitivity of this LR is considered as **medium**.	**Medium**
LR1.3	**Plantation** Plantation on hillside including Razor Hill which has approximately **5,500 nos.** of trees and **4.61 ha** within 500 m Assessment Area. There is approximately **2830 nos**. of trees and **2.11 ha** within the Study Area. The northern half of the Site SKI-1 is covered by this LR which is extensive plantation stand and extends further to the northern hillside ridge. This LR is low in both floral diversity and structural complexity. This LR is dominated by common exotic plantation trees including *Acacia mangium, Acacia auriculiformis, Acacia confusa, Lophostemon confertus, Eucalyptus citriodora* as well as some lower diversity of naturally developed native tree species including *Machilus pauhoi, Machilus chekiangensis* and *Schefflera heptaphylla*. Those vegetation are generally in fair health condition. Some rare and precious plant species including seedlings, undersized trees (i.e. DBH < 95mm) and trees (i.e. DBH ≥ 95mm) are identified in this LR which are recorded in **LR1.9 Important Trees & Rare and Precious Species**. The plantation is local significant and common. Those plantation trees are dense, providing a relatively moderate landscape amenity value and quality. This LR is a man-made resource and is able to be recreated reasonably easily. It has a reasonable capacity to accommodate change, the sensitivity of this LR is considered as **medium**.	**Medium**
LR1.4	**Shrubland**	**Medium**

ID. No.	Landscape Resources / Landscape Character Areas	Sensitivity (Low, Medium or High)
	This LR refers to the shrubland on the upland hillside which extends continuously through the hilltop of Razor Hill. This hillside shrubland is behind the woodland occurring at a lower altitude. The shrubland within the 500 m Assessment Area has approximately **2,300 nos.** of trees and **45.4 ha**. This LR is not located within Study Area. This LR is dominated by common species including shrubs *Rhaphiolepis indica, Rhodomyrtus tomentosa, Breynia fruticosa* and *Garcinia oblongifolia*, and herb *Scleria ciliaris, Dicranopteris pedata* and *Miscanthus floridulus*, with individuals of young to middle-aged exotic plantation trees *Acacia confusa* and *Acacia mangium* scattered on the hillside. Some rare and precious plant species including shrubs and seedlings of trees are identified in this LR which are recorded in **LR1.9 Important Trees & Rare and Precious Species**. The shrubland is local significant and common. The landscape amenity and quality are moderate with reasonable tolerance to change. Those vegetation are generally in mature and fair health condition. Therefore, the overall sensitivity of this LR is considered as **medium**.	
LR1.5	**Roadside Planting** The existing middle-aged roadside and buffer plantings along Po Lam Road North and Po Hong Road which provide good screening effect and enhance the overall landscape quality of the surrounding environment. This LR within 500 m Assessment Area has approximately 230 nos. of trees and 1.32 ha. These plantings are mainly common roadside amenity trees and shrubs to screen road alignment and associated structures along linear road network. There is approximately 14 nos.of trees and 0.06 ha with Study Area. These roadside plantings are local significant and common, and provide moderate amenity value to the existing environment. The landscape quality is moderate with reasonable tolerance to change. Therefore, the sensitivity of this LR is considered as **medium**.	**Medium**
LR1.6	**Open Space** This LR is an open space at Po Tsui Park. This is the first park in Tseung Kwan O which has approximately 4.2 ha. This LR located 250 m to the south of Site SKI-1 is approximately 400 nos. of trees and 4.2 ha within the 500 m Assessment Area. This LR is not located within Study Area. This park located near Po Lam Estate. There are various kinds of landscape amenity tree plantings and a wide range of leisure facilities including artificial grass pitch for soccer and hockey activities, 7-a-side hard-surface mini-soccer-cum-handball pitch, tennis courts, tennis practice courts, children's play area, sitting-out area, jogging trail with fitness stations, etc. The open space is regional significant and common. This LR has a relatively high amenity value. Those vegetation are generally common species in middle-aged and fair health condition. The landscape quality is moderate with reasonable tolerance to change due to the man-made resource of this LR. Therefore, the sensitivity of this LR is considered as **high**.	**High**

ID. No.	Landscape Resources / Landscape Character Areas	Sensitivity (Low, Medium or High)
LR1.7	**Semi-natural Watercourse** Three semi-natural watercourses located within the 500 m Assessment Area are approximately **3.6 km**. There is approximately **0.1km** within the Study Area. A comparatively large and permanent semi-natural hill stream is present in a valley located on the western part of the assessment area flowing from Tseng Lan Shue toward Tseung Kwan O Village. The bottom of this permanent watercourse remains fairly natural for the most part and comprises of a mixture of boulders and sand substrate. Water quality appears to be good to fair. The lower end has been channelised which are recorded in **LR1.8.** Those tributaries originating from various sources on Razor Hill and a semi-natural watercourse originating from Tai Ngau Wu. A small part of this steam located within Site SKI-1. The eastern semi-natural watercourse located near the site boundary of Site SKI-1, this watercourse has several seasonal branch tributaries originating from sources on of Razor Hill and flowing towards Tseung Kwan O Upper Village. Most of the section is shaded by dense woodland. Another eastern comparatively small seasonal semi-natural watercourse located far to the east of Site SKI-1, flowing from Razor Hill toward Po Lam Fire Station. Relatively low diversity of flora species is found in this LR and its riparian zone, including aquatic herb *Cyperus involucratus, Acorus gramineus* and *Commelina diffusa*, and trees *Ficus fistulosa, Syzygium jambos* and *Ficus hispida* which heavily shade the watercourses. Those trees are identified in this LR which are recorded in **LR1.1 Woodland** and **LR1.3 Plantation**. The semi-natural watercourses are local significant. Overall amenity value and quality are high with little tolerance to any development change. Therefore, the sensitivity of this LR is considered as **high**.	**High**
LR1.8	**Channelised Watercourse** One channelised watercourse located to the west of Site SKI-1 is approximately 0.04 ha within 500 m Assessment Area. This LR located on the lower end of the western steam is one part of this steam that has been channelised and covered as it passes into urban areas, although this part of the channelised section still retains a natural rocky stream . The channelised watercourse is local significant and common. This LR has a relatively medium amenity value and quality. This LR is relatively able to tolerant to any development change, since it is a man-made resource and is able to be recreated reasonably easily. Therefore, the sensitivity of this LR is considered as **medium.**	**Medium**
LR1.9	**Important Trees & Rare and Precious Species** There are no registered old and valuable trees (OVTs) within 500 m Assessment Area. Some rare and precious plant species are identified in the 500 m assessment area including *Aquilaria sinensis*, *Camellia sinensis*, *Cibotium barometz*, *Diospyros vaccinioides*, *Gnetum luofuense Pavetta hongkongensis*, *Pyrenaria spectabilis*, and *Rhododendron sp.*. A clump of protected fern *Cibotium barometz* is found as part of the bankside vegetation the large semi-natural watercourse. Two seedlings of protected tree *Aquilaria sinensis* and three self-seeded shrubs *Rhododendron* sp. are found on upland hillside at Razor Hill. A considerable	**High**

ID. No.	Landscape Resources / Landscape Character Areas	Sensitivity (Low, Medium or High)
	number of seedlings and saplings of *Aquilaria sinensis*, shrubs *Diospyros vaccinioides* and *Pavetta hongkongensis* and a patch of woody climber *Gnetum luofuense* are found at the lower altitude of hillside. A group of seedlings, a tree specimen of tree *Aquilaria sinensis* and a protected tree *Pyrenaria spectabilis* are found within Site SKI-1. Further details of rare and precious species trees and plants have been provided in Chapter 7 – Ecology at **Revised Final Preliminary Environmental Study Report (Site SKI-1) ref: 242030-REP-035-02.** This LR is local significant and rare. Those vegetation are generally in fair health condition. This LR has a relatively high amenity value and quality. Given that this LR is a little tolerant to change with the rare and precious species identified, the sensitivity of this LR is considered to be **high**.	
LCA1.1	**Peaks, Upland and Hillside Landscape** This is a large scale peak, upland and hillside landscape lying between around 40 mPD and 400 mPD which is approximately **98.38 ha** within the 500m Assessment Area. There is approximately **4.13 ha** within Study Area. The natural landscape is consisted of hillsides, knolls, ridges and spurs with woodland, shrubland and grassland. There are some man-made landscape is consisted of plantation on man-made slope and low hillside. The upland areas created a physical boundary throughout Razor Hill and Tai Sheung Tok. Some hiking trails a part of Little Hawaii Trail on Razor Hill located on this LCA are for recreational use. It is an important green vista for the lower level of the Po Lam, Tsui Lam and Tseung Kwan O Town Centre development (refer to **Figure 5.4.1**). Dominance species include *Acacia auriculiformis*, *Acacia mangium*, *Machilus pauhoi, Mallotus paniculatus* and *Schefflera hetaphylla*. Those woodland trees in this LCA have a low suitability of transplanting and are relatively intolerant to change. This LCA is local significant and common. The overall landscape amenity value and quality of this LCA are high with relatedly little tolerance to change. The sensitivity of this LCA is considered to be **high**.	**High**
LCA1.2	**Urban Recreational Landscape** Po Tsui Park (total area of 4.2 ha) in Po Lam are vital recreational assets for this highly urbanised space (refer to **Figure 5.4.1**). This LCA within the 500 m Assessment Area is approximately **4.31 ha**. This LCA is not located within Study Area. They provide mostly passive facilities such as sitting areas as well as active facilities including artificial grass pitch for soccer and hockey activities, 7-a-side hard-surface mini-soccer-cum-handball pitch, tennis practice courts, children's play area, jogging trail with fitness stations, etc. Amenity planting is well maintained in these public landscape areas. They are highly utilized by different groups of people in all age. This LCA is regional significant. The overall landscape amenity value and quality of this LCA are high with relatedly fair tolerance to change. The sensitivity of this LR is considered to be **high**.	**High**

ID. No.	Landscape Resources / Landscape Character Areas	Sensitivity (Low, Medium or High)
LCA1.4	**Miscellaneous Rural Fringe Landscape** Some low-rise development is located on the periphery of the upland and hillside areas of Tai Ngau Wu which is approximately **7.88 ha** within the 500m Assessment Area. This LCA is not located within Study Area. Some common amenity plantings located around scattered fruit trees and local agricultural field areas of the villages or edges of low-rise developments are identified on this LCA. This LCA is local significant and common. Given that those vegetation cover has been disturbed due to the village nature, the overall landscape amenity value and quality of this LCA are moderate. The sensitivity of this LCA is considered as **medium**.	**Medium**
LCA1.5	**Miscellaneous Urban Fringe Landscape** This is a mainly low-rise development on the periphery of the major urban areas together with the hillsides of Razor Hill, which is approximately **34.93 ha** within the 500m Assessment Area. There is approximately **0.5 ha** within Study Area.Typically on hillsides around urban areas that are less easily developed, this LCA includes roads, highway structures, slope works, scattered residential developments, open spaces and G/IC developments (i.e. schools, hospital, ventilation building, bus terminus, reservoir, power station, etc.). As a residual landscape type that is characterized by the transition of natural landscapes to a semi-urban and informal residential setting, the semi-urbanized nature and engineering works of the area with moderate amenity value of the vegetation (refer to **Figure 5.4.1**). This LCA is local significant and common. The overall landscape amenity value and quality of this LCA are moderate. Therefore, the overall sensitivity of this LCA is considered as **medium**.	**Medium**
LCA1.6	**Residential Urban Landscape** This LCA consists of high rise residential developments, which is approximately **15.81 ha** within 500m Assessment Area. This LCA is not located within Study Area. These developments are mostly built at the end of 1980's by public housing developments at Po Lam and Tsui Lam. In this LCA, retail uses, public open space, sitting out areas and rest gardens are well distributed near public housing blocks (refer to **Figure 5.4.1**). Vegetation of this LCA includes podium garden, amenity walkway, roadside planting, rest garden and sitting-out area which are exclusively designed. This LCA is local significant and common. The overall landscape amenity value and quality of this LCA are moderate. Given that the urbanized nature of the area, this LCA has a reasonably high tolerance to change. The sensitivity of this LCA is considered to be **low**.	**Low**

Note:

[1] The numbers of trees are approximate number only which quoted were based on the board bush tree survey in **Appendix A.** The above figure of numbers of trees are rounded to the nearest tens place.

[2] The above figure of areas are rounded to the one decimal place.

[3] The LRs / LCAs within 500 m Assessment Area are indicated on **Figure 5.1.1** and **Figure 5.3.1**. Photo views illustrating the LRs / LCAs within 500 m Assessment Area are illustrated in **Figure 5.2.1** and **Figure 5.4.1.**

Table 5.2: Landscape Resources / Landscape Character Areas and Their Sensitivity at Site SKI-2

ID. No.	Landscape Resources / Landscape Character Areas	Sensitivity (Low, Medium or High)
LR2.1	**Woodland** The woodland located on natural hillside of Ap Tsai Shan, which has **approximately 31,900 nos.** of trees and **64.18 ha** within the 500 m Assessment Area. There is approximately **1,148 nos**. of trees and **1.7 ha** within the Study Area. Some smaller fragmented patches of woodland are present in between the low density residential villas located on the eastern part of the assessment area. The vegetation of this woodland within 500 m Assessment Area shares similar floristic composition as those within the Site SKI-2 (refer to **Figure 5.2.2**). The woodland within the Site SKI-2 is dominated tree including *Aporusa dioica, Schefflera heptaphylla, Alangium chinense, Machilus chekiangensis, Mallotus paniculatus* in the overstory. The understory is dominated by shrub including *Psychotria asiatica* and *Litsea rotundifolia* var. *oblongifolia*, and herb *Alocasia macrorrhizos* and *Microstegium ciliatum.* The woodland is local significant and high quality. Those woodland trees have a low suitability of transplanting. The quality and significant of this LR are high with relatively little tolerance to accommodate change. Some rare and precious plant species including shrubs, climbers and seedlings of trees are identified in this LR which are recorded in **LR2.9 Important Trees & Rare and Precious Species**. Those vegetation are generally in fair health condition. The sensitivity of this LR is considered as **High**.	**High**
LR2.3	**Plantation** Plantation on lowland hillside of Ap Tsai Shan which has approximately 5,900 nos. of trees and 14.96 ha within the 500m Assessment Area. There is approximately **719 nos**. of trees and **1.75 ha** within the Study Area.The plantation located within the eastern part of the Site SKI-2 is composed of various species including exotic planted tree *Acacia confusa* and self-seeded *Melia azedarach*, and ornamental shrub *Calliandra haematocephala*. The understory of the plantation is found with common herb *Dicranopteris pedata, Microstegium ciliatum* and *Cyclosorus interruptus* and young, self-seeded seedlings of woody plant such as *Bridelia tomentosa*. The plantation located on the southwestern part of the assessment area which are man-made slopes adjoining Po Lam Road North, Po Ning Road and Ying Yip Road and covered in plantation woodland with dominant species including tree *Eucalyptus citriodora, Acacia confusa, Leucaena leucocephala, Casuarina equisetifolia* and *Bambusa* sp. A small part of those plantation located on man-made slope within the southern part of Site SKI-2 along Ying Yip Road. Smaller patches of plantations located alongside Hang Hau Village and Shui Bin Tsuen. The species dominated in these small plantation stands include exotic planted tree *Acacia confusa*, *Eucalyptus citriodora, Pinus elliottii* and *Casuarina equisetifolia*. Some rare and precious plant species including seedlings, undersized trees (i.e. DBH < 95mm), trees (i.e. DBH ≥ 95mm), climber and shrub are identified in this LR which are recorded in **LR2.9 Important Trees & Rare and Precious Species**. Those plantation trees are generally planted on man-made slope in fair health condition in this LR (refer to **Figure 5.2.2**). The plantation is local significant and common. Those plantation trees are dense and mature, providing a relatively low landscape amenity value and landscape quality is moderate. This LR is a man-made resource and is able to be recreated reasonably easily. It has a reasonable capacity to accommodate change, the sensitivity of this LR is considered as **medium**.	**Medium**

ID. No.	Landscape Resources / Landscape Character Areas	Sensitivity (Low, Medium or High)
LR2.4	**Shrubland** This LR refers to the shrubland on the hilltop of Ap Tsai Shan which are some small patches of shrubland located on the western part of the assessment area. This LR has approximately 190 nos. of trees and 3.8 ha within the 500 m Assessment Area. **This LR is not located within Study Area.** These hillside shrubland patches are surrounded by **LR2.1 Woodland** as well as **LR2.3 Plantation** that occur at a lower altitude. The dominated species include shrub *Rhodomyrtus tomentosa, Eurya nitida, Rhaphiolepis indica, Embelia laeta* and herb *Dicranopteris pedata* and *Scleria ciliaris*. Some rare and precious plant species including shrubs and woody climbers are identified in this LR which are recorded in **LR2.9 Important Trees & Rare and Precious Species**. Those shrub and plantation trees are generally in fair health condition in this LR (refer to **Figure 5.2.2**). The shrubland is local significant and common. The landscape amenity and quality are moderate with reasonable tolerance to change. Those vegetation are generally in mature and fair health condition. Therefore, the overall sensitivity of this LR is considered as **medium.**	**Medium**
LR2.5	**Roadside Planting** The existing middle-aged roadside and buffer plantings along Po Lam Road North, Po Shun Road, Sheung Ning Road and Po Ning Road which provide good screening effect and enhance the overall landscape quality of the surrounding environment. This LR within 500 m Assessment Area has approximately **900 nos**. of trees and **4.84 ha**. There is approximately **42 nos.** of trees and **0.21 ha** within the Study Area These plantings are mainly common roadside amenity trees and shrubs to screen road alignment and associated structures along linear road network. The part of roadside planting are amenity shrub located within the Site SKI-2 at the roundabout of the Ying Yip Road and Po Ning Road. These roadside plantings are local significant and common, and provide moderate amenity value to the existing environment. The landscape quality is moderate with reasonable tolerance to change. Therefore, the sensitivity of this LR is considered as **medium**.	**Medium**
LR2.6	**Open Space**	
LR2.6a	**Open Space at Sheung Ning Playground** This playground located at Po Shun Road and Wan Po Road and adjacent to various public open space and recreational facilities includes Tseung Kwan O Swimming Pool and Tseung Kwan O Sports Ground. This open space at Sheung Ning Playground is approximately 2.5 ha. This LR located 300 m to the southwest of Site SKI-2 has approximately **400 nos.** of trees and **2.1 ha** within the 500 m Assessment Area. This LR is not located within Study Area. It provides a large lawn, fitness facilities, 500 m jogging track under flowering trees, three basketball courts, an inclusive children's playground, some walking pebble trails, Tai Chi fitness garden, a herb garden and a community garden. A part of elevated flyover covers located within Sheung Ning Playground is designed as noise barriers with facade greening. Therefore, the flyover blends with the park facilities and landscaped gardens. An approximately 0.051 ha community garden is under the LCSD's "Community Garden Programme" with the guidance of the instructors, participants can learn how to grow ornamental plants, fruits and vegetables in this garden with harvesting.	**High**

ID. No.	Landscape Resources / Landscape Character Areas	Sensitivity (Low, Medium or High)
	The open space is local significant and common. This LR has a relatively high amenity value. Those vegetation are generally common species in middle-aged and fair health condition. The landscape quality is moderate with reasonable tolerance to change due to the man-made resource of this LR. Therefore, the sensitivity of this LR is considered as **high**.	
LR2.6b	**Open Space at Pui Shing Garden** Pui Shing Garden located adjacent to Sai Kung Tseung Kwan O Government Complex is a public rest garden and open plaza. This LR located 300 m to the southeast of Site SKI-2 has approximately **80 nos.** of trees and **0.5 ha** within the 500 Assessment Area. This LR is not located within Study Area. This garden design is blended with the government complex which provides a public front yard garden. Some fitness facilities and sitting-out areas are also provided with vegetative green buffer of Pui Shing Road and Pui Shing Lane. The open space is local significant and common. This LR has a relatively high amenity value. Those vegetation are generally common species in middle-aged and fair health condition. The landscape quality is moderate with reasonable tolerance to change due to the man-made resource of this LR. Therefore, the sensitivity of this LR is considered as **high**.	**High**
LR2.7	**Semi-natural Watercourse** Three semi-natural watercourses located within 500 m Assessment Area are approximately 0.4 km. There is approximately **0.2 km** within the Study Area. A small, unpolluted permanent semi-natural hill stream located at the centre of the Site SKI-2. Originating from several sources on the hillside in the assessment area near Clear Water Bay Road, tributaries from the upper reach merge and the stream flows from the northwest to the southeast, before feeding into a box culvert passing beneath Ying Yip Road. This LR and its riparian zone are dominated by herb *Alocasia macrorrhizos, Boehmeria nivea, Blechnum orientale* and *Microstegium ciliatum.* Another semi-natural stream located on the further north of the assessment area and next to Ah Kung Wan Road. Only a very short section of this stream is covered in the assessment area. This stream flows between the Former Shaw Studio and Ah Kung Wan Road, then into the A Kung Wan. The semi-natural watercourses are local significant and common. Overall amenity value and quality are high with little tolerance to any development change. Therefore, the sensitivity of this LR is considered as **high**.	**High**

ID. No.	Landscape Resources / Landscape Character Areas	Sensitivity (Low, Medium or High)
LR2.9	**Important Trees & Rare and Precious Species** There are no registered old and valuable trees (OVTs) within 500 m Assessment Area. Some rare and precious plant species are identified in the 500 m Assessment Area including *Aquilaria sinensis*, *Diospyros vaccinioides*, *Pavetta hongkongensis*, *Gnetum luofuense* and *Keteleeria fortunei, Aquilaria sinensis* (sapling), three individuals of shrub *Pavetta hongkongensis* and one patch of the woody climber *Gnetum luofuense* located close to semi-natural watercourses. Numerous individuals of shrub *Diospyros vaccinioides* and a large patch of woody climber *Gnetum luofuense* are found on the hilltops of Ap Tsai Shan. A number of seedlings, saplings and at least five trees of *Aquilaria sinensis* are found on woodland within the Site SKI-2. Considerable number of seedlings, undersized trees and mature trees of *Aquilaria sinensis* are identified on the plantation within the Site SKI-2. Some mature trees *Aquilaria sinensis* are found being damaged or chopped by illegal logging. A patch of woody climber *Gnetum luofuense* and individual of shrub *Diospyros vaccinioides* are found within Site SKI-2. 50 individuals of *Keteleeria fortunei* are found within 500 m Assessment Area. Further details of rare and precious species trees and plants have been provided in Chapter 7 – Ecology at **Revised Final Preliminary Environmental Study Report (Site SKI-2) ref: 242030-REP-036-02**. This LR is local significant and rare. This LR has a relatively high amenity value and quality. Given that this LR is a little tolerant to change with the rare and precious species identified, the sensitivity of this LR is considered to be **high**.	**High**
LR2.10	**Sea Waterbody and Coastline** This LR refers to the water bodies, together with natural coastline, is valuable physical resources and one of the key elements that generates this important landscape identity and character of Silverstand and Silverstand Beach. This LR within the 500m Assessment Area is approximately **8.57 ha**. This LR is not located within Study Area. This LR is local significant and common. This LR has a relatively high amenity value and quality. Given that this LR is a little tolerant to change with the natural resources, the sensitivity of this LR is considered to be **high**.	**High**
LCA2.1	**Peaks, Upland and Hillside Landscape** This is a large scale peak, upland and hillside landscape lying between around 40 mPD and 150 mPD which is approximately **32.06 ha** within the 500 m Assessment Area. There is approximately **1.73 ha** within the Study Area. The natural landscape is consisted of hillsides, ridges, knolls, and spurs with woodland, shrubland and grassland. There are some man-made landscape is consisted of plantation on man-made slope and low hillside. The upland areas created a physical boundary throughout Ap Tsai Shan. It is an important green vista for the lower level of the Hang Hau. Dominance species include *Aporusa dioica, Schefflera hetaphylla, Alangium chinense, Machilus chekiangensis* and *Mallotus paniculatus*. Those woodland trees in this LCA have a low suitability of transplanting and are relatively little tolerant to change. This LCA is local significant and common. The overall landscape amenity value and quality of this LCA are high with relatedly little tolerance to change. The sensitivity of this LCA is considered to be **high**.	**High**

ID. No.	Landscape Resources / Landscape Character Areas	Sensitivity (Low, Medium or High)
LCA2.2	**Urban Recreational Landscape** Tseung Kwan O Swimming Pool (2.5 ha) and Sheung Ning Playground (2.5 ha) in Hang Hau are vital recreational assets for this highly urbanised space (refer to **Figure 5.4.2**). This LCA within the 500m Assessment Area is approximately **6.45 ha**. This LCA is not located within Study Area. They provide mostly passive facilities such as large lawn, pavilion, sitting areas, herbs garden, community garden, as well as active facilities including fitness facilities, basketball courts, swimming pools, children's playground, walking pebble trails, Tai Chi fitness garden. Amenity planting is well maintained in these public landscape areas. They are highly utilized by different groups of people in all age. This LCA is local significant and common. The overall landscape amenity value and quality of this LCA are high with relatedly fair tolerance to change. The sensitivity of this LR is considered to be **high**.	**High**
LCA2.3	**Unban Peripheral Village Landscape** Some scattered developments are periphery of the Silverstrand coastal line on the hillside of Razor Hill and Ap Tsai Shan, which is approximately **54.95 ha** within the 500 m Assessment Area. This LCA is not located within Study Area. Typically located on hillside around urban fringe, these hillside and coastal areas are less easily developed, and primarily include roads and scattered low-rise residential development. The village nature of this area provide moderate amenity value of the vegetation. Some parts of Silverstrand coastal and Silverstrand Beach are natural landscape character provide high landscape quality in this area. This LCA is regional significant and common. The overall landscape amenity and quality of this LCA are high with relatedly little tolerance to change. The sensitivity of this LCA is considered to be **high**.	**High**
LCA2.5	**Miscellaneous Urban Fringe Landscape** This is a mainly low-rise development on the periphery of the major urban areas together with the hillsides of Ap Tsai Shan, which is approximately **54.32 ha** within 500 m Assessment Area. There is approximately **4.09 ha** within the Study Area. Typically on hillsides around urban areas that are less easily developed, this LCA includes roads, highway structures, engineering slope works, scattered residential developments, village, open spaces and G/IC developments (i.e. schools, hospital, ventilation building, power station, etc.). As a residual landscape type that is characterized by the transition of natural landscapes to a semi-urban and informal residential setting, the semi-urbanized nature and engineering works of the area with moderate amenity value of the vegetation. This LCA is local significant and common. The overall landscape amenity value and quality of this LCA are moderate. Therefore, the overall sensitivity of this LCA is considered as **medium**.	**Medium**
LCA2.6	**Residential Urban Landscape** This LCA consists of high rise residential developments, which is approximately **34.33 ha** within 500 m Assessment Area. There is approximately **0.32 ha** within Study Area.	**Low**

ID. No.	Landscape Resources / Landscape Character Areas	Sensitivity (Low, Medium or High)
	These developments are mostly built at 1990's by public housing developments at Hang Hau. In this LCA, retail uses, public open space, sitting out areas and rest gardens are well distributed near public housing blocks. Vegetation of this LCA includes podium garden, amenity walkway, roadside planting, rest garden and sitting-out area which are exclusively designed. This LCA is local significant and common. The overall landscape amenity value and quality of this LCA are moderate. Given that the urbanized nature of the area, this LCA has a reasonably high tolerance to change. The sensitivity of this LCA is considered to be **low**.	
LCA2.7	**Mixed Modern Comprehensive Urban Development Landscape** This area is comprised of developed area in Hang Hau with wide range of uses such as residential, retail / commercial and educational mixed comprehensive urban. This LCA within 500 m Assessment Area is approximately **18.69 ha.** This **LCA** is not located within Study Area. Mixed age of building blocks which are mostly built in 1990's with 50 storey height blocks. The urban development are dominated by mixed uses of residential / retails high-rise buildings and grade-separated pedestrian networks provide street level and multiple level of urban development setting. Some linear amenity plantings along carriageways, cycle tracks, linear public open spaces, podium gardens and rest gardens exclusively designed in this area. This LCA is local significant and common. The overall landscape amenity and quality of this LCA are moderate. It has a reasonably high tolerance to change due to high urbanized area. Therefore, the overall sensitivity of this LCA is consider to be **low**.	**Low**

Note:

[1] The numbers of trees are approximate number only which quoted were based on the board bush tree survey in **Appendix A.** The above figure of numbers of trees are rounded to the nearest tens place.

[2] The above figure of areas are rounded to the one decimal place.

[3] The LRs / LCAs within 500 m Assessment Area are indicated on **Figure 5.1.2** and **Figure 5.3.2**. Photo views illustrating the LRs / LCAs within 500 m Assessment Area are illustrated in **Figure 5.2.2** and **Figure 5.4.2.**

Table 5.5: Landscape Resources / Landscape Character Areas and Their Sensitivity at Site SKI-6

ID. No.	Landscape Resources / Landscape Character Areas	Sensitivity (Low, Medium or High)
LR6.1	**Woodland** The woodland located on natural hillside of Pak Shing Kok has approximately 8,300 nos. of trees and 16.6 ha within 500 m Assessment Area of the Site SKI-6. This LR is not located within Study Area. This LR located vicinity to the south of the Site SKI-6 is dominated by some mature shrubs and trees including *Rhus chinensis*, *R. succedanea. Aporusa dioica, Sapium sebiferum, Alangium chinense, Machilus chekiangensis* and *Mallotus paniculatus.* The climber *Dalbergia benthamii* is throughout the canopy and scattered individuals of exotic planted tree *Acacia confusa* are also found. Those vegetation are generally in fair health condition. Some rare and precious plant species including shrubs, climbers and seedlings of trees are identified in this LR which are recorded in **LR6.9 Important Trees & Rare and Precious Species**. The woodland is local significant and common. The landscape amenity and quality are moderate with reasonable intolerance to change. Those vegetation are generally in middle-aged and fair health condition. Therefore, the overall sensitivity of this LR is considered as **high**.	**High**
LR6.2	**Shrubland / Grassland** This LR refers to the shrubland / grassland on the upland hillside which extends continuously through the hilltop of Tai Ngau Wu. This LR within 500 m Assessment Area has approximately 360 nos. of trees and 14.5 ha. This LR is not located within Study Area. This LR is generally surrounded by woodland. The hillside shrubland / grassland in the southern part of the assessment area is dominated by common shrub *Rhaphiolepis indica, Baeckea frutescens*, grass *Miscanthus floridulus, Neyraudia reynaudiana*, and small tree *Aporusa dioica*, *Rhus chinensis* and *Sapium discolor*. Scattered patches of self-seeded *Leucaena leucocephala* and *Acacia confusa* are also recorded on this grassy shrubland; both are exotic species. Those vegetation are generally in fair health condition. The shrubland / grassland is local significant and common. The landscape amenity and quality are moderate with reasonable tolerance to change. Those vegetation are generally in middle-aged and fair health condition. Therefore, the overall sensitivity of this LR is considered as **medium.**	**Medium**
LR6.3	**Plantation** Plantation on hillside including Pak Shing Kok which has approximately 4,600 nos. of trees and 9.2 ha within 500 m Assessment Area. There is approximately 59 nos. of trees and 0.2 ha within the Study Area. The plantation occur along roadsides and on engineered slopes. Common species present are exotic planted trees include *Acacia confusa, Eucalyptus spp*. And *A. auriculiformis*. Vegetation development of the under- and middle-storeys vary in stands, with some stands mainly covered by leaf-litter and limited natural regeneration, while some have the shrub *Psychotria asiatica*, and trees *Aporusa dioica*, *Litsea glutinosa*, *Schefflera heptaphylla* and *Zanthoxylum avicennae*. The	**Medium**

ID. No.	Landscape Resources / Landscape Character Areas	Sensitivity (Low, Medium or High)
	plantation located at the west of the assessment area is relatively young in age, with exotic planted trees *Acacia confusa, Eucalyptus* sp., *Casuarina equisetifolia* and self-seed *Leucaena leucocephala* dominating the whole area. Some exotic species are dominated at the Site SKI-6 including *Leucaena leucocephala, Acacia confusa, Macaranga tanarius* var. *tomentosa* and *Ficus microcarpa.* Those vegetation are generally in fair health condition. Some rare and precious plant species including seedlings, undersized trees (i.e. DBH < 95mm) and trees (i.e. DBH ≥ 95mm) are identified in this LR which are recorded in **LR6.9 Important Trees & Rare and Precious Species**. The plantation is local significant. Those plantation trees are dense, providing a relatively moderate landscape amenity value. The landscape quality is moderate. This LR is a man-made resource and is able to be recreated reasonably easily. It has a reasonable capacity to accommodate change, the sensitivity of this LR is considered as **medium**.	
LR6.5	**Roadside Planting** The existing middle-aged roadside and buffer plantings along Chiu Shun Road, Ngan O Road, Wan Po Road, Sheung Ning Road and Po Ning Road which provide good screening effect and enhance the overall landscape quality of the surrounding environment. This LR within 500 m Assessment Area has approximately 980 nos. of trees and 3.9 ha. This LR is not located within Study Area. These plantings are mainly common roadside amenity trees and shrubs to screen road alignment and associated structures along linear road network. Those vegetation are generally in fair health condition. These roadside plantings are local significant and common, and provide moderate amenity value to the existing environment. The landscape quality is moderate with reasonable tolerance to change. Therefore, the sensitivity of this LR is considered as **medium**.	**Medium**
LR6.6	**Open Space**	
LR6.6a	**Open Space at Pui Shing Garden** Pui Shing Garden is a public rest garden and open plaza which located adjacent to Sai Kung Tseung Kwan O Government Complex. This LR located 250 m to the north of the Site SKI-6 has approximately 80 nos. of trees and 0.5 ha within 500 m Assessment Area. This LR is not located within Study Area. This garden design is blended with the government complex which provides a public front yard garden. Some fitness facilities and sitting-out areas are also provided with vegetative green buffer of Pui Shing Road and Pui Shing Lane. The open space is local significant and common. This LR has a relatively high amenity value. Those vegetation are generally common species in middle-aged and fair health condition. The landscape quality is moderate with reasonable tolerance to change due to the man-made resource of this LR. Therefore, the sensitivity of this LR is considered as **high**.	**High**

ID. No.	Landscape Resources / Landscape Character Areas	Sensitivity (Low, Medium or High)
LR6.6b	**Open Space at Hang Hau Garden** Hang Hau Garden is a terrace rest garden adjacent to Tin Hau Temple at Fu Tau Chau. This LR located 80 m to the northeast of the Site SKI-6 has approximately 50 nos. of trees and 0.2 ha within 500 m Assessment Area. This LR is not located within Study Area. This garden provides recreation facilities, open space and act as a front yard of Tin Hau Temple. Some passive open space including sitting areas, chess play areas, picnic areas are in shade under some mature and large trees. The open space is local significant and common. This LR has a relatively high amenity value. Those vegetation are generally common species in middle-aged and fair health condition. The landscape quality is moderate with reasonable tolerance to change due to the man-made resource of this LR. Therefore, the sensitivity of this LR is considered as **high**.	**High**
LR6.6c	**Open Space at Hang Hau Man Kuk Lane Park** Hang Hau Man Kuk Lane Park is a contemporary Chinese style garden at Hang Hau This LR located 150 m to the west of the Site SKI-6 has approximately 240 nos. of trees and 1.9 ha within 500 m Assessment Area. This LR is not located within Study Area. The white walls and grey rooftops resemble typical Suzhou and Hangzhou landscape architecture style. A pond laid at the centre of the garden is adorned with a traditional style bamboo pavilion. Some stone bridges built across the pond act as leisure walkways. In order to enriching the traditional Chinese garden ambience, there are various traditional Chinese garden plants including *Camellia azalea* and *Hibiscus mutabilis*. The park provides outdoor artificial turf bowling green with six rinks for a maximum of eight players in a rink at any time. This park also provides Chinese garden, covered plaza and fitness corner. The open space is local significant and common. This LR has a relatively high amenity value. Those vegetation are generally common species in middle-aged and fair health condition. The landscape quality is moderate with reasonable tolerance to change due to the man-made resource of this LR. Therefore, the sensitivity of this LR is considered as **high**.	**High**
LR6.6d	**Open Space at Tseung Kwan O Sports Ground** This LR is a multi-purpose sports ground for track and field events, which is approximately 5.9 ha. This LR located 300 m to the west of the Site SKI-6 has approximately 240 nos. of trees and 4.8 ha within 500 m Assessment Area. This LR is not located within Study Area. It is comprised of a main sports ground, a warm-up secondary sports ground, and other facilities for holding large-scale international competitions including 2009 Hong Kong Games, 2009 East Asian Games and 2011 Hong Kong Games. Its track and field facilities conform to the standard of International Association of Athletics Federations. The open space is regional significant and common. This LR has a relatively high amenity value. Those vegetation are generally common species in middle-aged and fair health condition. The landscape quality is moderate with reasonable tolerance to change due to the man-made resource of this LR. Therefore, the sensitivity of this LR is considered as **high**.	**High**
LR6.6e	**Open Space at Hong Kong Velodrome Park** Hong Kong Velodrome Park is a public park and open space which is approximately 5.3 ha. This LR located 400 m to the west of the Site SKI-6 has	**High**

ID. No.	Landscape Resources / Landscape Character Areas	Sensitivity (Low, Medium or High)
	approximately 100 nos. of trees and 1.1 ha within 500 m Assessment Area. It is landscaped with 1,200 nos. of trees of a wide variety. This LR is not located within Study Area. Apart from basic park facilities, it contains a skatepark, a central lawn, artificial lakes and a model boat pool. At the skatepark area, three half-pipes and bowls of varying levels of steepness of difficulty are provided for skateboarding and aggressive inline skating. The central lawn provides a large area of green open space for visitors to relax on. The artificial lakes blend in with the velodrome building with its curvilinear shape. One 40 cm deep model boat pool is provided for model boating. The park contains two sets of artistic feature seats. One set shows a pair of circular seats simulating two race bicycles. The other pair reflects the design for the organic geometry of the skatepark. The open space is regional significant and common. This LR has a relatively high amenity value. Those vegetation are generally common species in middle-aged and fair health condition. The landscape quality is moderate with reasonable tolerance to change due to the man-made resource of this LR. Therefore, the sensitivity of this LR is considered as **high**.	
LR6.9	**Important Trees & Rare and Precious Species** There are no registered old and valuable trees (OVTs) within 500 m Assessment Area. However, one large tree with diameter at breast height (DBH) greater than 1 m that is IT-0601 - *Ficus microcarpa*, 15 m (height), 20 m (crown spread), 2 m (DBH) is identified within the Site SKI-6. The tree located in a concrete planter of the existing temporary site office which is fair in health condition and tree form. This LR is local significant and rare. This LR has a relatively high amenity value and quality. Given that this LR is a little tolerant to change with the rare and precious species identified, the sensitivity of this LR is considered to be **high**.	**High**
LR6.11	**Grassland** This grassland located on engineered slopes of the middle of the Site SKI-6 and near to the existing temporary site office is dominated by grass *Cynodon dactylon*. This LR within 500 m Assessment Area is approximately less than 0.1 ha. There is approximately less than 0.1 ha within the Study Area. Those vegetation are generally in fair health condition. The vegetation is manmade planting on engineered slopes with heavy maintenance which provide low amenity value to the existing environment. The grassland are local significant and common. The landscape quality is low with reasonable tolerance to change, since it is a man-made resource and is able to be recreated reasonably easily. Therefore, the sensitivity of this LR is considered as **low**.	**Low**
LCA6.2	**Urban Recreational Landscape** Tseung Kwan O Sports Ground (5.9 ha) and Hang Hau Man Kuk Lane Park (1.9 ha) in Hang Hau are vital recreational assets for this highly urbanised space. This LCA within 500 m Assessment Area is approximately 8.0 ha. This LCA is not located within Study Area. They provide mostly passive facilities such as pavilion, sitting areas, community gardens, and ornamental planting gardens, as well as active facilities including football fields, and stadium. Amenity planting is well maintained in these public landscape areas. They are highly utilized by	**High**

ID. No.	Landscape Resources / Landscape Character Areas	Sensitivity (Low, Medium or High)
	different groups of people in all age. This LCA is regional significant and common. The overall landscape amenity value and quality of this LCA are high with relatedly fair tolerance to change. The sensitivity of this LCA is considered to be **high.**	
LCA6.5	**Miscellaneous Urban Fringe Landscape** Some low-rise development is located on the periphery of the upland and hillside areas of Pak Shing Kok which is approximately 55.8 ha within 500 m Assessment Area. There is approximately 0.4 ha within the Study Area. Some common amenity plantings around car parks, scattered fruit trees and local agricultural field areas are located around the villages or edges of low-rise developments. This LCA is local significant and common. Given that those vegetation cover has been disturbed due to the village nature, the amenity value of the vegetation is moderate. The overall landscape amenity value and quality of this LCA are moderate. The sensitivity of this LCA is considered as **medium**.	**Medium**
LCA6.6	**Residential Urban Landscape** This LCA consists of high rise residential developments, which is approximately 15.8 ha with 500 m. This LCA is not located within Study Area. These developments are mostly built at the 1990's by public housing developments at Hang Hau. In this LCA, retail uses, public open space, sitting out areas and rest gardens are well distributed near public housing blocks. Vegetation of this LCA includes podium garden, amenity walkway, roadside planting, rest garden and sitting-out area which are exclusively designed. This LCA is local significant and common. The overall landscape amenity value and quality of this LCA are moderate. Given that the urbanized nature of the area, this LCA has a reasonably high tolerance to change. The sensitivity of this LCA is considered to be **low**.	**Low**
LCA6.7	**Mixed Modern Comprehensive Urban Development Landscape** This area is comprised of developed area in Hang Hau with wide range of uses such as residential, retail / commercial and educational mixed comprehensive urban. This LCA within 500 m Assessment Area is approximately 15.1 ha. This LCA is not located within Study Area.Mixed age of building blocks which are mostly built in 1990's to 2000's with 50 storey height blocks. The urban development are dominated by mixed uses of residential / retails high-rise buildings and grade-separated pedestrian networks provide street level and multiple level of urban development setting. Some linear amenity plantings along carriageways, cycle tracks, linear public open spaces, podium gardens and rest gardens exclusively designed in this area. This LCA is local significant and common. The overall landscape amenity and and quality of this LCA are moderate. It has a reasonably high tolerance to change due to high urbanized area. Therefore, the overall sensitivity of this LCA is consider to be **low**	**Low**

Note:

[1] The numbers of trees are approximate number only which quoted were based on the board bush tree survey in **Appendix A.** The above figure of numbers of trees are rounded to the nearest tens place.

[2] The above figure of areas are rounded to the one decimal place.

[3] The LRs / LCAs within 500 m Assessment Area are indicated on **Figure 5.1.5** and **Figure 5.3.5**. Photo views illustrating the LRs / LCAs within 500 m Assessment Area are illustrated in **Figure 5.2.5** and **Figure 5.4.5.**

Table 5.6: Landscape Resources / Landscape Character Areas and Their Sensitivity at Site SKI-11

ID. No.	Landscape Resources / Landscape Character Areas	Sensitivity (Low, Medium or High)
LR11.1	**Woodland** The woodland includes 53,400 nos. of trees and 53.4 ha within 500 m Assessment Area of Site SKI-11. There is approximately 2,870 nos. of trees and 2.2 ha within the Study Area. Some individual trees or small groups of exotic species (such as *Acacia confusa*) interspersed within Site SKI-11. In the overstorey, the dominance species include *Sterculia lanceolata, Cinnamomum camphora, Ficus hispida*, *Microcos nervosa* and *Mallotus paniculatus*. Some common species are found in the understorey including shrub *Psychotria asiatica*, and herb *Alocasia macrorrhizos* and *Lophatherum gracile*. This LR exceeds the Site SKI-11 and continues towards the assessment area in the west. This LR dominates the northern, western and eastern parts of the assessment area, covering much of the hillsides. Typical trees include *Sterculia lanceolata, Aporusa dioica, Schefflera heptaphylla, Rhus succedanea, Machilus chekiangensis, Mallotus paniculatus* and *Alangium chinense*, with understory is dominated by shrubs such as *Psychotria asiatica, Rhodomyrtus tomentosa, Diplospora dubia, Microcos nervosa* and herb *Lygodium japonicum, Alocasia macrorrhizos, Lophatherum gracile*. Those vegetation are generally in fair health condition in this LR. Some rare and precious plant species including shrubs, climbers and seedlings of trees are identified in this LR which are recorded in **LR11.9 Important Trees & Rare and Precious Species**. This woodland is local significant and common. Those woodland trees have a low suitability of transplanting and are relatively intolerant to change. The quality and significant of this LR are high with relatedly little tolerance to change. The sensitivity of this LR is considered to be **high**.	**High**
LR11.3	**Plantation** Plantation on hillside including Razor Hill which has approximately **5,300 nos.** of trees and **5.3 ha** within 500 m Assessment Area. There is approximately **670 nos.** of trees and **0.7 ha** within the Study Area. The northern side and a narrow strip along south and east sides of the Site SKI-11 are covered in plantation trees with some self-seeded native species interspersed. In the northern portion of the Site SKI-11 is occupied by comparatively younger stand which is dominated by *Acacia confusa* and *A. auriculiformis*, and with sparse understorey. The remaining plantation area located along the eastern and southern peripheries of the Site SKI-11 is covered by *Acacia confusa* and mixed with higher proportion of spontaneous growth of or previously retained native tree community including tree *Machilus pauhoi, Bridelia tomentosa, Schefflera heptaphylla*, shrub *Psychotria asiatica, Ilex asprella, Embelia laeta* and herb *Dicranopteris pedata, Lophatherum gracile* and *Cyclosorus parasiticus*. A small portion of this plantation extends further north outside of the assessment area. A swathe of plantation comprised of *Acacia confusa*, *Eucalyptus* species and *Casuarina equisetifolia* which stretches from the Yau Yue Wan Playground to King Yin Lane and Po Lam Road North. Some rare and precious plant species including seedlings, undersized trees (i.e. DBH < 95mm) and trees (i.e. DBH ≥ 95mm) are identified in this LR which are recorded in **LR11.9 Important Trees & Rare and Precious Species**.	**Medium**

ID. No.	Landscape Resources / Landscape Character Areas	Sensitivity (Low, Medium or High)
	The plantation is local significant and common. Those plantation trees are dense, providing a relatively moderate landscape amenity value. The landscape quality is fair. This LR is a man-made resource and is able to be recreated reasonably easily. Base on it has a reasonable capacity to accommodate change, the sensitivity of this LR is considered as **medium**.	
LR11.4	**Shrubland** This LR located on the northwest of assessment area is dominated by a continuous piece of shrubland. This LR has approximately 580 nos. of trees and 11.5 ha within 500 m Assessment Area. This LR is not located within Study Area. It extends to the north outside of the assessment area and towards Razor Hill. This hillside shrubland is surrounded by woodland occurring at a similar or lower altitude. Typical species include the shrubs *Rhaphiolepis indica, Rhodomyrtus tomentosa, Breynia fruticosa, Garcinia oblongifolia* and herbs *Scleria ciliaris, Dicranopteris pedata, Miscanthus floridulus*, with scattered exotic planted tree *Acacia confusa* and *Acacia mangium*. To the southeast of the assessment area lies a small piece of hilltop shrubland. This piece of shrubland is restricted to the top of Ap Tsai Shan. Those dominate species include shrub *Rhodomyrtus tomentosa, Eurya nitida, Rhaphiolepis indica, Embelia laeta* and herb *Dicranopteris pedata, Scleria ciliaris.* Some rare and precious plant species including shrubs and sapling / young trees are identified in this LR which are recorded in **LR11.9 Important Trees & Rare and Precious Species**. Those shrub and plantation trees are generally in fair health condition in this shrubland. The shrubland is local significant and common. The landscape amenity and quality are moderate with reasonable tolerance to change. Those vegetation are generally in mature and fair health condition. Therefore, the overall sensitivity of this LR is considered as **medium**.	**Medium**
LR11.5	**Roadside Planting** The existing middle-aged roadside and buffer plantings along Yau Yue Wan Village Road, Po Lam Road North, Po Fung Road and Po Hong Road which provide good screening effect and enhance the overall landscape quality of the surrounding environment. This LR within 500 m Assessment Area has approximately **500 nos. of trees** and **2.0 ha.** This LR is not located within Study Area. These plantings are mainly common roadside amenity trees and shrubs to screen road alignment and associated structures along linear road network. These roadside plantings are local significant and common, and provide moderate amenity value to the existing environment. The landscape quality is fair with reasonable tolerance to change. Therefore, the sensitivity of this LR is considered as **medium**.	**Medium**
LR11.6	**Open Space**	
LR11.6a	**Open Space at Yau Yue Wan Playground** Yau Yue Wan Playground is a 7-a-side soccer pitch together with small areas of amenity planting. This playground located near Yau Yue Wan Road and Yau Yue Wan Village provides active public open space to local use. This LR located 30 m to the east of the Site SKI-11 is approximately 0.3 ha. This LR is not located within Study Area.	**High**

ID. No.	Landscape Resources / Landscape Character Areas	Sensitivity (Low, Medium or High)
	This LR is local significant and common. The landscape quality of this LR is considered as moderate and could fairly accommodate change. Therefore, the overall sensitivity of this LR is considered as **high**.	
LR11.6b	**Open Space at Po Tsui Park** This is the first park in Tseung Kwan O located near Po Lam Estate which is approximately **4.2 ha.** This LR located 400 m to the southwest of the Site SKI-11 has approximately **50 nos. of trees** and **1.3 ha** within 500 m Assessment Area. This LR is not located within Study Area. There are various kinds of landscape amenity tree plantings and a wide range of leisure facilities including artificial grass pitch for soccer and hockey activities, 7-a-side hard-surface mini-soccer-cum-handball pitch, tennis courts, tennis practice courts, children's play area, sitting-out area, jogging trail with fitness stations, etc.. The open space is regional significant and common. This LR has a relatively high amenity value. Those vegetation are generally common species in middle-aged and fair health condition. The landscape quality is fair with reasonable tolerance to change due to the man-made resource of this LR. Therefore, the sensitivity of this LR is considered as **high**.	**High**
LR11.7	**Semi-natural Watercourse** A number of small semi-natural watercourse located within 500 m Assessment Area are approximately 2.0 km. This LR is not located within Study Area. This LR is a number of small semi-natural streams, flowing from the north to the south, located to the north of assessment area. These are generally clean and unpolluted hill streams originating from the range of Razor Hill. The lower sections of these streams are diverted into ditches and drainage channels. This LR is dominated by aquatic herb including *Acorus gramineus, Pentasachme caudatum, Sphenomeris chinensis, Lemna minor* and *Alternanthera sessilis.* No watercourse are present within Site SKI-11. The semi-natural watercourses are local significant and common. Overall amenity value and quality are high with little tolerance to any development change. Therefore, the sensitivity of this LR is considered as **high**.	**High**
LR11.9	**Important Trees & Rare and Precious Species** There are no registered old and valuable trees (OVTs) within 500 m Assessment Area. Some rare and precious plant species are identified in the 500 m Assessment Area. Chopped mature trees of protected tree *Aquilaria sinensis* were noted within the woodland. Considerable number of *Aquilaria sinensis* seedlings are found inside the woodland. Two mature trees, young trees and seedlings of *Aquilaria sinensis* are also founded along woodland edge within the Site SKI-11. Woody climber *Gnetum luofuense* is identified at the woodland edge at the southeastern part of the Site SKI-11. An area of shrub *Diospyros vaccinioides* and low numbers of *Aquilaria sinensis* saplings/young trees are also found on the upland hillside of Ap Tsai Shan. Three self-seeded *Rhododendron* sp. individuals are found in the shrubland within 500 m Assessment Area. Further details of rare and precious species trees and plants have been provided in Chapter 7 – Ecology at **Revised Final Preliminary Environmental Study Report (Site SKI-11) ref: 242030-REP-038-02**. This LR is local significant and rare. Those vegetation are generally in fair health condition. This LR has a relatively high amenity value and quality. Given that	**High**

ID. No.	Landscape Resources / Landscape Character Areas	Sensitivity (Low, Medium or High)
	this LR is a little tolerant to change with the rare and precious species identified, the sensitivity of this LR is considered to be **high**.	
LCA11.1	**Peaks, Upland and Hillside Landscape** This is a large scale peak, upland and hillside landscape lying between around 40 mPD and 400 mPD which is approximately **60.3 ha** within 500 m Assessment Area. There is approximately **2.1 ha** within the Study Area. The natural landscape is consisted of hillsides, knolls, ridges and spurs with woodland and shrubland which mixed with some man-made landscape including plantation. The upland areas created a physical boundary throughout Razor Hill and Ap Tsai Shan. It is an important green vista for the lower level of the Po Lam development. Dominance species include *Sterculia lanceolata, Aporusa dioica, Schefflera heptaphylla, Rhus succedanea, Machilus chekiangensis, Mallotus paniculatus* and *Alangium chinense*). Those woodland trees in this LCA have a low suitability of transplanting and are relatively intolerant to change. This LCA is local significant and common. The overall landscape amenity and quality and of this LCA are high with relatedly little tolerance to change. The sensitivity of this LCA is considered to be **high**.	**High**
LCA11.2	**Urban Recreational Landscape** Po Tsui Park (4.2 ha) in Po Lam is a vital recreational assets for this highly urbanised space. This LCA within 500 m Assessment Area is approximately **2.1 ha**. This LCA is not located within Study Area. They provide mostly passive facilities such as pavilion, sitting areas, community gardens and ornamental planting gardens, as well as active facilities including soccer cum hockey pitch with artificial turf, hard surfaced soccer cum handball pitch, tennis courts, tennis practice courts, children's play area and a jogging trail. Amenity planting is well maintained in these public landscape areas. They are highly utilized by different groups of people in all age. This LCA is local significant and common. The overall landscape amenity value and quality of this LCA are high with relatedly fair tolerance to change. The sensitivity of this LR is considered to be **high**.	**High**
LCA11.3	**Unban Peripheral Village Landscape** Some scattered developments are periphery of the Silverstrand coastal line on the hillside of Razor Hill and Ap Tsai Shan, which is approximately 0.3 ha within 500 m Assessment Area. This LCA is not located within Study Area. Typically located on hillside around urban fringe, these hillside and coastal areas are less easily developed, and primarily include roads and scattered low-rise residential development. The village nature of this area provide moderate amenity value of the vegetation. Some parts of Silverstrand coastal and Silverstrand Beach are natural landscape character provide high landscape quality in this area. This LCA is local significant and common. The overall landscape amenity and quality and of this LCA are high with relatedly little tolerance to change. The sensitivity of this LCA is considered to be **high**.	**High**
LCA11.5	**Miscellaneous Urban Fringe Landscape** This is a mainly low-rise development on the periphery of the major urban areas together with the hillsides of Razor Hill and Ap Tsai Shan which is approximately 24.3 ha within 500 m Assessment Area. There is approximately 0.9 ha within the Study Area.	**Medium**

ID. No.	Landscape Resources / Landscape Character Areas	Sensitivity (Low, Medium or High)
	Typically on hillsides around urban areas that are less easily developed, this LCA includes roads, highway structures, slope works, scattered residential developments, open spaces and G/IC developments (i.e. schools, ventilation building, power station, etc.). As a residual landscape type that is characterized by the transition of natural landscapes to a semi-urban and informal residential setting, the semi-urbanized nature and engineering works of the area with moderate amenity value of the vegetation. This LCA is local significant and common. The overall landscape amenity value and quality of this LCA are moderate. Therefore, the overall sensitivity of this LCA is considered as **medium**.	
LCA11.6	**Residential Urban Landscape** This LCA consists of high rise residential developments, which is approximately 18.9 ha. This LCA is not located within Study Area. These developments are mostly built at the end of 1980's by public housing developments at Po Lam. In this LCA, retail uses, public open space, sitting out areas and rest gardens are well distributed near public housing blocks. Vegetation of this LCA includes podium garden, amenity walkway, roadside planting, rest garden and sitting-out area which are exclusively designed. This LCA is local significant and common. The overall landscape amenity value and quality of this LCA are moderate. Given that the urbanized nature of the area, this LCA has a reasonably high tolerance to change. The sensitivity of this LCA is considered to be **low**.	**Low**
LCA11.7	**Mixed Modern Comprehensive Urban Development Landscape** This area is comprised of developed area in Po Lam with wide range of uses such as residential, retail / commercial and educational mixed comprehensive urban. This LCA within 500 m Assessment Area is approximately 13.9 ha. This LCA is not located within Study Area. Mixed age of building blocks which are mostly built in 1990's to 2000's with 50 storey height blocks. The urban development are dominated by mixed uses of residential / retails high-rise buildings and grade-separated pedestrian networks provide street level and multiple level of urban development setting. Some linear amenity plantings along carriageways, cycle tracks, linear public open spaces, podium gardens and rest gardens exclusively designed in this area. This LCA is local significant and common. The overall landscape amenity and quality of this LCA are moderate. It has a reasonably high tolerance to change due to high urbanized area. Therefore, the overall sensitivity of this LCA is consider to be **low**.	**Low**

Note:

[1] The numbers of trees are approximate number only which quoted were based on the board bush tree survey in **Appendix A.** The above figure of numbers of trees are rounded to the nearest tens place.

[2] The above figure of areas are rounded to the one decimal place.

[3] The LRs / LCAs within 500 m Assessment Area are indicated on **Figure 5.1.6** and **Figure 5.3.6**. Photo views illustrating the LRs / LCAs within 500 m Assessment Area are illustrated in **Figure 5.2.6** and **Figure 5.4.6.**

Table 5.7: Landscape Resources / Landscape Character Areas and Their Sensitivity at Site SKI-12

ID. No.	Landscape Resources / Landscape Character Areas	Sensitivity (Low, Medium or High)
LR12.1	**Woodland** The woodland located on natural hillside of Siu Chik Sha has **133,000 nos.** of trees **and 47.5 ha** within 500 m Assessment Area. There is approximately **5780 nos.** of trees and **1.8 ha** within the Study Area. The eastern part of the assessment area is dominated by extensive woodland, which extends within the Site SKI-12. Given that the dense vegetation and steep topography on this LR in the Site SKI-12 lies within deep valley. The northern area is occupied by mature shrubs and trees, including *Rhus chinensis*, *R. succedanea. Aporusa dioica, Sapium sebiferum, Alangium chinense, Machilus chekiangensis* and *Mallotus paniculatus.* The climber *Dalbergia benthamii* is throughout the canopy and scattered individuals of exotic planted tree *Acacia confusa* are also recorded. The overstorey of this LR located on Siu Chik Sha is dominated by common tree species including *Aporusa dioica*, *Mallotus paniculatus*, *Machilus chekiangensis*, *Machilus velutina* and *Schefflera heptaphylla* at the north of the Site SKI-12. Its understorey is covered by shrub *Psychotria asiatica*, small tree *Litsea rotundifolia* var. *oblongifolia*, and numerous seedlings of trees *Machilus* spp., *Ardisia* spp., *Aidia canthioides* and *Ormosia pachycarpa.* The woodland to the south of the Site SKI-12 along the channelised watercourse is young woodland, composed of common trees *Litsea glutinosa*, *Machilus* sp., *Mallotus paniculatus*, *Sterculia lanceolata* and *Schefflera heptaphylla*. Shrubs such as *Psychotria asiatica* and herb *Alpinia hainanensis* are recorded in the understorey. The woodland within the ex-landfill site in the western part of the assessment area is extensively dominated by self-seeded, weedy tree *Leucaena leucocephala.* Very limited number of young exotic plantation trees *Acacia* sp. and self-seeded native tree *Macaranga tanarius* var. *tomentosa* are also recorded. Those vegetation are generally in fair health condition within this LR. Some rare and precious plant species including shrubs, climbers and seedlings of trees are identified in this LR which are recorded in **LR12.9 Important Trees & Rare and Precious Species**. The woodland is local significant and common. Those woodland trees have a low suitability of transplanting. The quality and significant of this LR are high with relatedly little tolerance to change. The sensitivity of this LR is considered to be **high**.	**High**

ID. No.	Landscape Resources / Landscape Character Areas	Sensitivity (Low, Medium or High)
LR12.2	**Shrubland / Grassland** This LR refers to the shrubland / grassland mixed located to the north of the Site SKI-12 at Pak Shing Kok and the north of Ha Yeung Shan, as well as a small patch on the top of the engineered slope to the southwest of the Site SKI-12. This LR within 500 m Assessment Area has approximately 170 nos. of trees and 6.9 ha. This LR is not located within Study Area. The hillside grassland/shrubland in the northern part of the assessment area is dominated by common shrub *Rhaphiolepis indica, Baeckea frutescens*, grass *Miscanthus floridulus, Neyraudia reynaudiana*, and small tree *Aporusa dioica*, *Rhus chinensis* and *Sapium discolor*. Scattered patches of self-seeded *Leucaena leucocephala* and *Acacia confusa* are also recorded on this grassy shrubland; both are exotic species. The shrubland / grassland is local significant and common. The landscape amenity and quality are moderate with reasonable tolerance to change. Those vegetation are generally in middle-aged and fair health condition. Therefore, the overall sensitivity of this LR is considered as **medium**.	**Medium**
LR12.3	**Plantation** Plantation on hillside of Siu Chik Sha has approximately 8,300 nos. of trees and 16.5 ha within 500 m Assessment Area. This LR is not located within Study Area. This LR includes some areas of plantation located near to the grassland within the ex-landfill site along Wan Po Road, another larger continuous patch of southern plantation stands and other areas of plantation located on engineered slopes along roadsides; these are low in floral diversity and have simple structural complexity. Common species are dominated by exotic planted trees include *Acacia confusa, A. auriculiformis* and *Eucalyptus* spp. Vegetation development of the under- and middle-storeys vary in stands, with some stands mainly covered by leaf-litter and limited natural regeneration, while some have the shrub *Psychotria asiatica*, and trees *Aporusa dioica*, *Litsea glutinosa*, *Schefflera heptaphylla* and *Zanthoxylum avicennae*. The western plantation is relatively young in age, with exotic planted trees *Acacia confusa, Eucalyptus* sp., *Casuarina equisetifolia* and self-seed *Leucaena leucocephala* dominating the whole area. Those vegetation are generally in fair health condition. Some rare and precious plant species including seedlings, undersized trees (i.e. DBH < 95mm) and trees (i.e. DBH ≥ 95mm) are identified in this LR which are recorded in **LR12.9 Important Trees & Rare and Precious Species**. The plantation is local significant and common. Those plantation trees are dense, providing a relatively moderate landscape amenity value and landscape quality. This LR is a man-made resource and is able to be recreated reasonably easily. It has a reasonable capacity to accommodate change, the sensitivity of this LR is considered as **medium**.	**Medium**
LR12.6	**Open Space** This LR is an open space at Wan Po Road Pet Garden. This LR located 450 m to the west of the Site SKI-12 has approximately **20 nos.** of trees and **0.6 ha** within 500 m Assessment Area. This LR is not located within Study Area. This garden located within walking distance to the MTR LOHAS Park Station is adjacent to the Tseung Kwan O South Waterfront Promenade. There are a large pet zone and a small pet zone in the garden with a number of rain shelters and benches, providing a refreshing leisure area for pets and their owners. It provides public	**High**

ID. No.	Landscape Resources / Landscape Character Areas	Sensitivity (Low, Medium or High)
	facilities including car park, pet activity areas, pet latrines, pet excrete collection bins, pet shower area, rain shelters, benches, lawns, etc.. The open space is local significant and common. This LR has a relatively high amenity value. Those vegetation are generally common species in middle-aged and fair health condition. The landscape quality is moderate with reasonable tolerance to change due to the man-made resource of this LR. Therefore, the sensitivity of this LR is considered as **high**.	
LR12.7	**Semi-natural Watercourse** Three semi-natural watercourses located within 500 m Assessment Area are approximately 3.4 km. This LR is not located within Study Area. A semi-natural stream fed by several hillside tributaries lies to the east of the proposed Site. This semi-natural watercourse has natural stream bed and banks, with a good riparian zone and pools and riffles in the stream course itself. However, this watercourse have been subject to human disturbance in the past, with evidence of dumping throughout the accessible lengths. Siltation also appears to have recently occurred though the cause of this is unknown. The riparian zone is vegetated with trees *Syzygium jambos* and *Ficus fistulosa* and herb *Alpinia hainanensis*. Woody climbers *Caesalpinia crista* and *Dalbergia benthamii* are commonly found climbing on the tree canopies along the watercourse. Another semi-natural watercourse to the east of the Site SKI-12 has largely natural banks and stream bed. It has a well-vegetated riparian corridor and good water quality, with a slow flow and good visibility. Bankside vegetation include *Cyperus involucratus*, *Alpinia hainanensis,* and *Microstegium ciliatum*. Those trees are identified in this LR which are recorded in **LR12.1 Woodland** and **LR12.3 Plantation.** A weir and a bridge separates this section from the channelised section further to the south which is recorded in the lower section of the stream adjacent to Sewage Treatment Works and private residential area has been channelised which is recorded in **LR12.8 Channelised Watercourse.** The semi-natural watercourses are local significant and common. Overall amenity value and quality are high with little tolerance to any development change. Therefore, the sensitivity of this LR is considered as **high**.	**High**
LR12.8	**Channelised Watercourse** One Channelised watercourse located to the south of Site SKI-12 and approximately 0.7 km within 500 m Assessment Area. This LR is not located within Study Area. The chennelised watercourse is a part of the large steam located to the east of the Site SKI-12 and has largely natural banks and stream bed . A weir and a bridge separates this section from the channelised section further to the south. This LR is the lower section of the stream adjacent to Sewage Treatment Works and private residential area has been channelised. This heavily engineered watercourse is concrete-lined with a low flow channel in the middle of the channel bed. Two strips of plantation are present along the edges. Plant species recorded along this channelised watercourse is limited to exotic plantation tree *Acacia confusa*, weedy tree *Leucaena leucocephala* and herb *Wedelia trilobata*. This channel is tidal influence and directly connected to the sea. Those trees are identified in this LR which are recorded in **LR12.1 Woodland** and **LR12.3 Plantation.**	**Medium**

ID. No.	Landscape Resources / Landscape Character Areas	Sensitivity (Low, Medium or High)
	The Channelised watercourse is local significant and common. This LR has a relatively medium amenity value and quality. This LR is relatively able to tolerant to any development change, since it is a man-made resource and is able to be recreated reasonably easily. Therefore, the sensitivity of this LR is considered as **medium.**	
LR12.9	**Important Trees & Rare and Precious Species** There are no registered old and valuable trees (OVTs) within 500 m Assessment Area. Some rare and precious plant species are identified in the 500 m assessment area. Numerous seedlings of trees *Ormosia pachycarpa* are found at the understory of the woodland trees. Some woody climber *Gnetum luofuense*, shrubs *Diospyros vaccinioides*, *Pavetta hongkongensis*, and tree *Aquilaria sinensis* and *Ormosia pachycarpa* are found in the woodland area within Site SKI-12. A group of at least five individuals of shrub *Diospyros vaccinioides* is recorded in the southern part of the assessment area. Further details of rare and precious species trees and plants have been provided in Chapter 8 – Ecology at **Revised Final Preliminary Environmental Study Report (Site SKI-12) ref: 242030-REP-044-02**. This LR is local significant and rare. Those vegetation are generally in fair health condition. This LR has a relatively high amenity value and quality. Given that this LR is a little tolerant to change with the rare and precious species identified, the sensitivity of this LR is considered to be **high**.	**High**
LR12.11	**Grassland** This LR is approximately **16.5 ha** within 500 m Assessment Area. There is approximately 0.5 ha within the Study Area. A strip of grassland located on engineered slopes along the western boundary of the Site SKI-12 comprises an extensive area of grassland, covering the land on the western side of the Shaw Tseung Kwan O Film Studios. This area is the former Tseung Kwan O Stage I Landfill maintained by Environmental Protection Department and has been restored and reserved for leisure and recreational development in the future. The grassland strip within the Site SKI-12 (refer to **Figure 5.2.7**) is dominated by grass *Imperata cylindrica* var. *major, Cynodon dactylon* and *Panicum maximum* and herb *Bidens alba.* Ornamental shrubs including *Bougainvillea glabra* and *Duranta erecta* planted along the slope toe of this grassland and the vegetation is maintained by the Shaw Tseung Kwan O Film Studios. Grassland in the disused landfill area is heavily maintained. The dominated species include grass *Axonopus compressus, Imperata cylindrica* var. major, *Panicum maximum* and *Pennisetum polystachion,* herb *Bidens alba* and self-seeded, young tree of *Leucaena leucocephala*. Those trees are identified in this LR which are recorded in **LR12.1 Woodland** and **LR12.3 Plantation**. Those vegetation are generally in fair health condition. This LR is local significant and common. This LR has a relatively low amenity value and quality. This LR is relatively able to tolerant to any development change, since it is a man-made resource and is able to be recreated reasonably easily. Therefore, the sensitivity of this LR is considered as **low.**	**Low**

ID. No.	Landscape Resources / Landscape Character Areas	Sensitivity (Low, Medium or High)
LCA12.1	**Peaks, Upland and Hillside Landscape** This is a large scale peak, upland and hillside landscape lying between around 40 mPD and 400 mPD which is approximately **44.8 ha** within 500 m Assessment Area. This LCA is not located within Study Area. There is approximately 2.1 ha within the Study Area. The natural landscape is consisted of hillsides, knolls, ridges and spurs with woodland. The upland areas created a physical boundary throughout Siu Shik Sha. It is an important green vista for the lower level of the Tseung Kwan O Town Centre and Lohas Park development. Dominance species include *Rhus chinensis, R. succedanea. Aporusa dioica, Sapium sebiferum, Alangium chinense, Machilus chekiangensis* and *Mallotus paniculatus, Aporusa dioica, Machilus velutina, Schefflera heptaphylla and Acacia confusa.* Most of those woodland trees in this LCA have a low suitability of transplanting and are relatively intolerant to change. This LCA is local significant and common. The overall landscape amenity, quality and significant of this LCA are high with relatedly little tolerance to change. The sensitivity of this LCA is considered to be **high**.	**High**
LCA12.5	**Miscellaneous Urban Fringe Landscape** This is a mainly low-rise development on the periphery of the major urban areas together with the hillsides of Razor Hill, Ap Tsai Shan, Tai Sheung Tok, Mau Wu Shan, Pak Shing Kok and Siu Chik Sha, which is approximately **38.3 ha** within 500 m Assessment Area. Typically on hillsides around urban areas that are less easily developed, this LCA includes roads, highway structures, slope works, scattered residential developments, open spaces and G/IC developments (i.e. schools, hospital, ventilation building, bus terminus, reservoir, power station, etc.). As a residual landscape type that is characterized by the transition of natural landscapes to a semi-urban and informal residential setting, the semi-urbanized nature and engineering works of the area with moderate amenity value of the vegetation. This LCA is local significant and common. The overall landscape amenity value and quality of this LCA are moderate. Therefore, the overall sensitivity of this LCA is considered as **medium**.	**Medium**
LCA12.7	**Mixed Modern Comprehensive Urban Development Landscape** This area is comprised of developed area in Po Lam, Hang Hau, Tseung Kwan O Town Centre and Siu Chik Sha with wide range of uses such as residential, retail / commercial and educational mixed comprehensive urban. This LCA within 500 m Assessment Area is approximately 21.2 ha. There is approximately **0.3 ha** within the Study Area. Mixed age of building blocks which are mostly built in 1990's to 2000's with 50 storey height blocks. The urban development are dominated by mixed uses of residential / retails high-rise buildings and grade-separated pedestrian networks provide street level and multiple level of urban development setting. Some linear amenity plantings along carriageways, cycle tracks, linear public open spaces, podium gardens and rest gardens exclusively designed in this area.	**Low**

ID. No.	Landscape Resources / Landscape Character Areas	Sensitivity (Low, Medium or High)
	This LCA is local significant and common. The overall landscape amenity and quality of this LCA are moderate. It has a reasonably high tolerance to change due to high urbanized area. Therefore, the overall sensitivity of this LCA is consider to be **low**.	
LCA12.9	**Ongoing Major Development Landscape** This LCA is consisted of temporary soft landscape treatments such as hydro-seeding and site formation platform which is approximately 21.4 ha within 500 m Assessment Area. This LCA is not located within Study Area. Site formation works for the platforms of the ongoing major developments at Pak Shing Kok have been completed, thus the majority of this area is devoid of any vegetation. The overall landscape amenity, significance and quality of this LCA are low with relatively high tolerance to change. Therefore, the sensitivity of this LCA is considered to be **low**.	**Low**

Note:

[1] The numbers of trees are approximate number only which quoted were based on the board bush tree survey in **Appendix A.** The above figure of numbers of trees are rounded to the nearest tens place.

[2] The above figure of areas are rounded to the one decimal place.

[3] The LRs / LCAs within 500 m Assessment Area are indicated on **Figure 5.1.7** and **Figure 5.3.7**. Photo views illustrating the LRs / LCAs within 500 m Assessment Area are illustrated in **Figure 5.2.7** and **Figure 5.4.7.**

5.3 Sensitivity of LRs and LCAs

5.3.1 The Project has been divided into broad units of similar landscape character based on a process of landscape characterisation which draws on the information gathered in the desktop study and site surveys. Further, the identification of the LCA makes reference to the *Landscape Value Mapping of Hong Kong (December 2005).*

5.3.2 Landscape resources and Landscape Character Areas are affected by the proposed development identified and mapped using a combination of desk-top study and followed by onsite verification. Each component affecting the sensitivity of the LR/LCA will be reviewed in relation to:

- Quality of landscape character/resources;
- Importance and rarity of special landscape elements;
- Ability of the landscape to accommodate change;
- Significance of the change in local and regional context; and
- Maturity of the landscape.

5.3.3 The sensitivity of LR/LCA are assessed in **Table 5.1-5.7**, and summarized in **Table 5.8**. Detailed descriptions for the ratings of sensitivity of LRs/LCAs are provided in **Table 5.1-5.7**.

Table 5.8: Sensitivity of LRs/LCAs

ID No.	LRs / LCAs	Quality (High, Medium, Low)	Rarity (High, Medium, Low)	Importance (local, regional, national or global)	Ability to Accommodate Change(Low, Medium, High)	Maturity (Low, Medium, High)	Sensitivity (Low, Medium, High)
Site SKI-1							
LR1.1	Woodland	High	Medium	Local	Low	High	High
LR1.2	Shrubland / Grassland	Medium	Low	Local	Medium	Medium	Medium
LR1.3	Plantation	Medium	Low	Local	Medium	Medium	Medium
LR1.4	Shrubland	Medium	Low	Local	Medium	High	Medium
LR1.5	Roadside Planting	Medium	Low	Local	Medium	Medium	Medium
LR1.6	Open Space at Po Tsui Park	High	Low	Regional	Medium	Medium	High
LR1.7	Semi-natural Watercourse	High	Medium	Local	Low	Medium	High
LR1.8	Channelised Watercourse	Medium	Low	Local	High	Low	Medium
LR1.9	Important Trees & Rare and Precious Species	Medium	High	Local	Low	Medium	High
LCA1.1	Peaks, Upland and Hillside Landscape	High	Low	Local	Low	High	High

ID No.	LRs / LCAs	Quality (High, Medium, Low)	Rarity (High, Medium, Low)	Importance (local, regional, national or global)	Ability to Accommodate Change(Low, Medium, High)	Maturity (Low, Medium, High)	Sensitivity (Low, Medium, High)
LCA1.2	Urban Recreational Landscape	High	Low	Regional	Medium	Medium	High
LCA1.4	Miscellaneous Rural Fringe Landscape	Medium	Low	Local	Medium	Medium	Medium
LCA1.5	Miscellaneous Urban Fringe Landscape	Medium	Low	Local	High	Medium	Medium
LCA1.6	Residential Urban Landscape	Medium	Low	Local	High	High	Low
Site SKI-2							
LR2.1	Woodland	High	Medium	Local	Low	High	High
LR2.3	Plantation	Medium	Low	Local	Medium	High	Medium
LR2.4	Shrubland	Medium	Low	Local	Medium	High	Medium
LR2.5	Roadside Planting	Medium	Low	Local	Medium	Medium	Medium
LR2.6a	Open Space at Sheung Ning Playground	Medium	Low	Local	Medium	Medium	High
LR2.6b	Open Space at Pui Shing Garden	Medium	Low	Local	Medium	Medium	High

ID No.	LRs / LCAs	Quality (High, Medium, Low)	Rarity (High, Medium, Low)	Importance (local, regional, national or global)	Ability to Accommodate Change(Low, Medium, High)	Maturity (Low, Medium, High)	Sensitivity (Low, Medium, High)
LR2.7	Semi-natural Watercourse	High	Low	Local	Low	Medium	High
LR2.9	Important Trees & Rare and Precious Species	High	High	Local	Low	Medium	High
LR2.10	Sea Waterbody and Coastline	High	Low	Local	Low	High	High
LCA2.1	Peaks, Upland and Hillside Landscape	High	Low	Local	Low	High	High
LCA2.2	Urban Recreational Landscape	High	Low	Local	Medium	Medium	High
LCA2.3	Unban Peripheral Village Landscape	High	Low	Regional	Low	Medium	High
LCA2.5	Miscellaneous Urban Fringe Landscape	Medium	Low	Local	High	Medium	Medium
LCA2.6	Residential Urban Landscape	Medium	Low	Local	High	High	Low
LCA2.7	Mixed Modern Comprehensive Urban Development Landscape	Medium	Low	Local	High	High	Low
Site SKI-6							

ID No.	LRs / LCAs	Quality (High, Medium, Low)	Rarity (High, Medium, Low)	Importance (local, regional, national or global)	Ability to Accommodate Change(Low, Medium, High)	Maturity (Low, Medium, High)	Sensitivity (Low, Medium, High)
LR6.1	Woodland	Medium	Low	Local	Low	Medium	High
LR6.2	Shrubland / Grassland	Medium	Low	Local	Medium	Medium	Medium
LR6.3	Plantation	Medium	Low	Local	Medium	Medium	Medium
LR6.5	Roadside Planting	Medium	Low	Local	Medium	Medium	Medium
LR6.6a	Open Space at Pui Shing Garden	Medium	Low	Local	Medium	Medium	High
LR6.6b	Open Space at Hang Hau Garden	Medium	Low	Local	Medium	Medium	High
LR6.6c	Open Space at Hang Hau Man Kuk Lane Park	Medium	Low	Local	Medium	Medium	High
LR6.6d	Open Space at Tseung Kwan O Sports Ground	Medium	Low	Regional	Medium	Medium	High
LR6.6e	Open Space at Hong Kong Velodrome Park	Medium	Low	Regional	Medium	Medium	High
LR6.9	Important Trees & Rare and Precious Species	High	Low	Local	Low	High	High
LR6.11	Grassland	Low	Low	Local	Medium	Low	Low

ID No.	LRs / LCAs	Quality (High, Medium, Low)	Rarity (High, Medium, Low)	Importance (local, regional, national or global)	Ability to Accommodate Change(Low, Medium, High)	Maturity (Low, Medium, High)	Sensitivity (Low, Medium, High)
LCA6.2	Urban Recreational Landscape	High	Low	Regional	Medium	Medium	High
LCA6.5	Miscellaneous Urban Fringe Landscape	Medium	Low	Local	Medium	Medium	Medium
LCA6.6	Residential Urban Landscape	Medium	Low	Local	High	High	Low
LCA6.7	Mixed Modern Comprehensive Urban Development Landscape	Medium	Low	Local	High	High	Low
Site SKI-11							
LR11.1	Woodland	High	Low	Local	Low	High	High
LR11.3	Plantation	Medium	Low	Local	Medium	High	Medium
LR11.4	Shrubland	Medium	Low	Local	Medium	High	Medium
LR11.5	Roadside Planting	Medium	Low	Local	Medium	Medium	Medium
LR11.6a	Open Space at Yau Yue Wan	Medium	Low	Local	High	Medium	High
LR11.6b	Open Space at Po Tsui Park	Medium	Low	Regional	Medium	Medium	High

ID No.	LRs / LCAs	Quality (High, Medium, Low)	Rarity (High, Medium, Low)	Importance (local, regional, national or global)	Ability to Accommodate Change(Low, Medium, High)	Maturity (Low, Medium, High)	Sensitivity (Low, Medium, High)
LR11.7	Semi-natural Watercourse	High	Low	Local	Low	Medium	High
LR11.9	Important Trees & Rare and Precious Species	High	High	Local	Low	High	High
LCA11.1	Peaks, Upland and Hillside Landscape	High	Low	Local	Low	High	High
LCA11.2	Urban Recreational Landscape	High	Low	Local	High	Medium	High
LCA11.3	Unban Peripheral Village Landscape	High	Low	Local	Low	Medium	High
LCA11.5	Miscellaneous Urban Fringe Landscape	Medium	Low	Local	Medium	Medium	Medium
LCA11.6	Residential Urban Landscape	Medium	Low	Local	High	High	Low
LCA11.7	Mixed Modern Comprehensive Urban Development Landscape	Medium	Low	Local	High	High	Low
Site SKI-12							
LR12.1	Woodland	High	Low	Local	Low	High	High

ID No.	LRs / LCAs	Quality (High, Medium, Low)	Rarity (High, Medium, Low)	Importance (local, regional, national or global)	Ability to Accommodate Change(Low, Medium, High)	Maturity (Low, Medium, High)	Sensitivity (Low, Medium, High)
LR12.2	Shrubland / Grassland	Medium	Low	Local	Medium	Medium	Medium
LR12.3	Plantation	Medium	Low	Local	Medium	Medium	Medium
LR12.6	Open Space	Medium	Low	Local	Medium	Medium	High
LR12.7	Semi-natural Watercourse	High	Low	Local	Low	Medium	High
LR12.8	Channelized Watercourse	Medium	Low	Local	High	Low	Medium
LR12.9	Important Trees & Rare and Precious Species	High	High	Local	Low	Low	High
LR12.11	Grassland	Low	Low	Local	High	Low	Low
LCA12.1	Peaks, Upland and Hillside Landscape	High	Low	Local	Low	High	High
LCA12.5	Miscellaneous Urban Fringe Landscape	Medium	Low	Local	Medium	Medium	Medium
LCA12.7	Mixed Modern Comprehensive Urban Development Landscape	Medium	Low	Local	High	High	Low
LCA12.9	Ongoing Major Development Landscape	Low	Low	Local	High	Low	Low

5.4 Broad Brush Tree Survey

5.4.1 A broad brush tree group survey within the proposed housing site has been conducted in August 2016. The justification of the existing vegetation will be affected by the proposed site formation, , removal of existing vegetation for site clearance, construction of associate infrastructure works and construction of engineering slope which are based on this survey. Detailed tree felling application and compensatory planting proposals will be submitted in accordance with ETWB TCW No. 29/2004 and DEVB TCW No. 7/2015 at detailed design stage.

6 LANDSCAPE ASSESSMENT

6.1 Potential Sources of Impacts

6.1.1 Reference is made to Agreement No. CE 61/2014(CE) – Site formation and Infrastructural Works for Nine Housing sites – Feasibility Study on the scope and extent of the proposed site formation and infrastructural works. Sources of landscape impacts of five housing (SKI-1, SKI-2, SKI-6, SKI-11, SKI-12) sites during the construction stage are described below while the impacts of these potential sources on each LRs and LCAs are provided in **Table 6.1, 6.2, 6.5, 6.7 & 6.8** respectively. The magnitude of unmitigated landscape changes associated with the construction phase and operation phase of the project are assessed and described in **Table 6.9.**

Direct Impacts:

- site clearance including removal of existing trees, vegetation cover, natural terrain, watercourse,
- the scale of engineering slope cutting / filling for temporary and permanent ground development,
- slope vegetation and roadside planting clearance works for road widening and infrastructure works,
- the man-made slope and retaining walls within natural terrain or previously undeveloped hillside landscapes, and
- the urban development within natural or previously undeveloped landscapes.

Indirect Impacts:

- construction traffic,
- the laying of utilities, including water, drainage and power,
- temporary site access areas, site cabins and heavy machinery,
- increased road traffic congestion,
- after dark lighting and welding,
- dust during dry weather, and
- potential surface run-off or accidental spillage of chemicals, lubricants and pollution from the construction site.

6.2 Prediction of Significance of Landscape Change

6.2.1 The magnitude of change, before implementation of mitigation measures, on the landscape resources (LRs) and landscape character areas (LCAs) that would occur in the construction stage and operation stage are described below and tabulated in **Table 6.1 to 6.8**, and summarized in **Table 6.9**.

Table 6.1: Landscape Impacts of the Proposed Works during Construction Stage at Site SKI-1

Id No.	LRs / LCAs	Source of Impact		Description of Impacts [1]	Magnitude of change (Large / Intermediate / Small / Negligible)	
		Construction	Operation		Construction	Operation
LR1.1	**Woodland**	**Direct Impact:** • Site clearance including removal of existing vegetation • Construction of public housing sites, associate infrastructure works and engineered slope (prior to establishment of planting) **Indirect Impact:** • Potential indirect impacts of construction works	• Housing site development and associated infrastructure works.	**Direct Impact:** • Impact within 500m Assessment Area o Approximately 3.45% (2.1 ha out of 60.84 ha) of this LR will be affected. o Approximately **13.3%** (80 m out of 600 m) of Little Hawaii Trail will be affected. • Impact within Study Area o Approximately **93 %** (2.1 ha out of 2.26 ha) of this LR will be affected. o Approximately **80 %** (80 m out of 100 m) of Little Hawaii Trail will be affected. • The affected area of this LR would be irreversible and permanently alienated by the proposed works. • Adverse impact. • Poor compatibility of the proposed housing site development with the surrounding landscape context. • Those affected vegetation are proposed to be removed which include native woodland and plantation tree including *Acacia auriculiformis, Acacia mangium, Aporusa dioica, Macaranga tanarius var. tomentosa, Machilus chekiangensis, Machilus pauhoi, Mallotus paniculatus, Schefflera heptaphylla and Sterculia lanceolata,* shrub including *Microcos nervosa, Litsea rotundifolia var. oblongifolia, Alangium chinense, Embelia laeta* and *Diplospora dubia*, and herb including *Lophatherum gracile, Cyclosorus parasiticus* and *Lygodium*. Those affected vegetation are common species and young to middle-aged. • Some rare species found at the proposed Site SKI-1 will also be affected and will be further discussed in **LR1.9 Important Trees & Rare and Precious Species.** • The unmitigated impacts during construction stage are the same as the unmitigated impacts during operation stage. • Approximately 1.9 ha of woodland compensation within 500m of the Site SKI-1 are proposed for compensation, and are presented in Figure 7.2.1.	Large	Large

				Indirect Impact: • The landscape quality of this LR is likely to be affected due to the potential construction dust and other disturbances arising from construction works during construction stage. • The landscape quality of this LR is likely to be affected due to the potential surface run-off or accidental spillage of chemicals, lubricants and pollution from the construction site during construction stage.		
LR1.2	**Shrubland / Grassland**	**Direct / Indirect Impact:** • No direct / indirect impact on this LR due to no proposed works in this LR	Nil	**Direct / Indirect Impact:** • N/A	Negligible	Negligible
LR1.3	**Plantation**	**Direct Impact:** • Site clearance including removal of existing vegetation • Construction of public housing sites and engineered slope (prior to establishment of planting) **Indirect Impact:** • Potential indirect impacts of construction works	• Housing site development and associated infrastructure works.	**Direct Impact:** • Impact within 500m Assessment Area o Approximately **45.77%** (2.11 ha out of 4.61 ha) of this LR will be affected. • Impact within Study Area o Approximately **100%** (2.11 ha out of 2.11 ha) of this LR will be affected. • The affected area of this LR would be irreversible and permanently alienated by the proposed works. • Adverse impact. • Poor compatibility of the proposed housing site development with the surrounding landscape context. • Those affected vegetation are proposed to be removed which include common exotic plantation trees *Acacia mangium, Acacia auriculiformis, Acacia confusa, Lophostemon confertus, Eucalyptus citriodora* as well as lower diversity of naturally developed native tree species *Machilus pauhoi, Machilus chekiangensis* and *Schefflera heptaphylla.* Those affected trees are the mixed of heavy standard size and semi-mature size. • Some rare species found at the proposed Site SKI-1 will also be affected and will be further discussed in **LR1.9 Important Trees & Rare and Precious Species.** • The unmitigated impacts during construction stage are the same as the unmitigated impacts during operation stage. **Indirect Impact:** • The landscape quality of this LR is likely to be affected due to the potential construction dust and other disturbances arising from construction works during construction stage.	Large	Large

				• The landscape quality of this LR is likely to be affected due to the potential surface run-off or accidental spillage of chemicals, lubricants and pollution from the construction site during construction stage.		
LR1.4	**Shrubland**	**Direct / Indirect Impact:** • No direct / indirect impact on this LR due to no proposed works in this LR	Nil [2]	**Direct / Indirect Impact:** N/A	Negligible	Negligible
LR1.5	**Roadside Planting**	**Direct / Indirect Impact:** • No direct / indirect impact on this LR due to no proposed works in this LR	Nil	**Direct / Indirect Impact:** N/A	Negligible	Negligible
LR1.6	**Open Space at Po Tsui Park**	**Direct / Indirect Impact:** • No direct / indirect impact on this LR due to no proposed works in this LR	Nil	**Direct / Indirect Impact:** N/A	Negligible	Negligible
LR1.7	**Semi-natural Watercourse**	**Direct Impact:** • Site clearance including removal of existing semi-natural watercourse • Construction of associated infrastructure works (prior to establishment of planting) **Indirect Impact:** • Potential indirect impacts of construction works	• Housing site development and associated infrastructure works.	**Direct Impact:** • Impact within 500m Assessment Area o Approximately **2.78%** (0.1 km out of 3.6 km) of this LR will be affected. • Impact within Study Area o Approximately **100%** (0.1 km out of 0.1 km) of this LR will be affected. • The affected area of this LR would be irreversible and permanently alienated by the proposed works. • Adverse impact. • Poor compatibility of the proposed housing site development with the surrounding landscape context. • Those affected vegetation are proposed to be removed which are recorded in **LR1.1 Woodland** and **LR1.3 Plantation**. • The unmitigated impacts during construction stage are the same as the unmitigated impacts during operation stage. **Indirect Impact:** • The water quality of this LR is likely to be affected due to the potential construction dust and other disturbances arising from construction works during construction stage. • The water quality of this LR is likely to be affected due to the	Large	Large

				potential surface run-off or accidental spillage of chemicals, lubricants and pollution from the construction site during construction stage. • The water quality of this LR is likely to be affected due to more human disturbance during operation stage.		
LR1.8	**Channelised Watercourse**	**Direct Impact:** • No direct impact on this LR due to no proposed works in this LR **Indirect Impact:** • Potential surface run-off or accidental spillage of chemicals, lubricants and pollution from the construction site	• Housing site development and associated infrastructure works.	**Direct Impact:** • N/A **Indirect Impact:** • The water quality of this LR is likely to be affected due to the potential construction dust and other disturbances arising from construction works during construction stage. • The water quality of this LR is likely to be affected due to the potential surface run-off or accidental spillage of chemicals, lubricants and pollution from the construction site during construction stage. • The water quality of this LR is likely to be affected due to more human disturbance during operation stage. • The water quality of this LR is likely to be affected The potential surface run-off or accidental spillage of chemicals, lubricants and pollution from vehicle during operation stage	Small	Negligible
LR1.9	**Important Trees & Rare and Precious Species**	**Direct Impact:** • Site clearance including removal of existing vegetation **Indirect Impact:** • the potential surface run-off or accidental spillage of chemicals, lubricants and pollution from the construction site	• Housing site development and associated infrastructure works.	**Direct Impact:** • Some rare and precious species are identified at Site SKI-1, which are likely to be affected by the proposed housing development. These include approximately 30 nos. of tree *Aquilaria sinensis*, a group of seedlings of tree *Aquilaria sinensis*, at least 30 nos. of tree *Pyrenaria spectabilis* and 1 no. of shrub *Pavetta hongkongensis* are found which are proposed to be transplanted. • Permanent and irreversible impact. • Adverse impact. • Poor compatibility of the proposed housing site development with the surrounding landscape context. • The unmitigated impacts during construction stage are the same as the unmitigated impacts during operation stage. **Indirect Impact:** • The landscape quality of this LR is likely to be affected due to the potential construction dust and other disturbances arising from construction works during construction stage. • The landscape quality of this LR is likely to be affected due to the potential surface run-off or accidental spillage of chemicals, lubricants and pollution from the construction site during construction stage.	Large	Large

LCA1.1	**Peaks, Upland and Hillside Landscape**	**Direct Impact:** • Site clearance including removal of existing vegetation • Construction of public housing sites, associate infrastructure works and engineered slope (prior to establishment of planting) **Indirect Impact:** • Potential indirect impacts of construction works	• Housing site development and associated infrastructure works.	**Direct Impact:** • Impact within 500m Assessment Area o Approximately **4.2%** (4.13 ha out of 98.38 ha) of this LR will be affected. • Impact within Study Area o Approximately **100%** (4.13 ha out of 4.13 ha) of this LR will be affected. • The affected area of this LCA at Razor Hill would be irreversible and permanently alienated by the proposed works. • Adverse impact. • Poor compatibility of the proposed housing site development with the surrounding landscape context. • The unmitigated impacts during construction stage are the same as the unmitigated impacts during operation stage. **Indirect Impact:** • The landscape quality of this LCA is likely to be affected due to the potential construction dust and other disturbances arising from construction works during construction stage. • The landscape quality of this LCA is likely to be affected due to the potential surface run-off or accidental spillage of chemicals, lubricants and pollution from the construction site during construction stage.	Large	Large
LCA1.2	**Urban Recreational Landscape**	**Direct / Indirect Impact:** • No direct / indirect impact on this LCA due to no proposed works in this LCA	Nil	**Direct / Indirect Impact:** • N/A	Negligible	Negligible
LCA1.4	**Miscellaneous Rural Fringe Landscape**	**Direct / Indirect Impact:** • No direct / indirect impact on this LCA due to no proposed works in this LCA	Nil	**Direct / Indirect Impact:** • N/A	Negligible	Negligible
LCA1.5	**Miscellaneous Urban Fringe Landscape**	**Direct Impact:** • Site clearance including removal of existing vegetation • Construction of associate infrastructure works (prior to establishment of planting)	Housing site development and associated infrastructure works. • Housing site development and associated	**Direct Impact:** • Impact within 500 m Assessment Area o Approximately **1.43%** (0.5 ha out of 34.93 ha) of this LR will be affected. • Impact within Study Area o Approximately **100%** (0.5 ha out of 0.5 ha) of this LR will be affected. • The affected area of this LCA near to Tseung Kwan O Upper Village would be temporarily and permanently alienated by the proposed	Small	Small

		Indirect Impact: • Potential indirect impacts of construction works	infrastructure works.	works respectively. • The unmitigated impacts during construction stage are the same as the unmitigated impacts during operation stage. **Indirect Impact:** • The landscape quality of this LCA is likely to be affected due to the potential construction dust and other disturbances arising from construction works during construction stage. • The landscape quality of this LCA is likely to be affected due to the potential surface run-off or accidental spillage of chemicals, lubricants and pollution from the construction site during construction stage.		
LCA1.6	**Residential Urban Landscape**	**Direct / Indirect Impact:** • No direct / indirect impact on this LCA due to no proposed works in this LCA	Nil	**Direct / Indirect Impact:** • N/A	Negligible	Negligible

Note:

[1] The above figure of areas are rounded to the one decimal place. The numbers of trees are approximate number only which quoted were based on the board bush tree survey in Appendix A. The above figure of numbers of trees are rounded to the nearest tens place.

[3] The affected LR1.7 semi-natural watercourse and LR1.8 channelised watercourse are illustrated in Figure 7.1.10. Please refer to ecology section in Preliminary Environmental Study Reports for details.

[4] N/A - Not applicable

[5] The affected area of the LRs / LCAs within 500 m Assessment Area are indicated on Figure 5.1.1 and Figure 5.3.1. Photo views illustrating the affected area of the LRs / LCAs within 500 m Assessment Area are illustrated in Figure 5.2.1 and Figure 5.4.1.

Table 6.2: Landscape Impacts of the Proposed Works at Site SKI-2

Id No.	Landscape Resources / Landscape Character Areas	Source of Impact		Description of Impacts [1]	Magnitude of change (Large / Intermediate / Small / Negligible)	
		Construction	Operation		Construction	Operation
LR2.1	**Woodland**	**Direct Impact:** • Site clearance including removal of existing vegetation • Construction of public housing sites, associate infrastructure works and engineered slope (prior to establishment of planting) **Indirect Impact:** • Potential indirect impacts of construction works	• Housing site development and associated infrastructure works.	**Direct Impact:** • Impact within 500m Assessment Area o Approximately **2.6%** (1.7 ha out of 64.18 ha) of this LR will be affected. • Impact within Study Area o Approximately 100% (1.7 ha out of 1.7 ha) of this LR will be affected. • The affected area of this LR would be irreversible and permanently alienated by the proposed works respectively. • Adverse impact. • Poor compatibility of the proposed housing site development with the surrounding landscape context. • Those affected vegetation are proposed to be removed which include native woodland common species tree *Aporusa dioica, Schefflera heptaphylla, Alangium chinense, Machilus chekiangensis, Mallotus paniculatus* in the overstory. Those affected trees are the mixed of young to middle-aged. The understory is dominated by shrub including *Psychotria asiatica* and *Litsea rotundifolia* var. *oblongifolia*, and herb *Alocasia macrorrhizos* and *Microstegium ciliatum.* • Some rare species found at the proposed Site SKI-2 will also be affected and will be further discussed in **LR2.9 Important Trees & Rare and Precious Species.** • The unmitigated impacts during construction stage are the same as the unmitigated impacts during operation stage. • 1.96 ha of woodland compensation within 500m of the Site SKI-2 are proposed for compensation, and are presented in Figure 7.2.2.		

Id No.	Landscape Resources / Landscape Character Areas	Source of Impact		Description of Impacts [1]	Magnitude of change (Large / Intermediate / Small / Negligible)	
		Construction	Operation		Construction	Operation
				Indirect Impact: • The landscape quality of this LR is likely to be affected due to the potential construction dust and other disturbances arising from construction works during construction stage. • The landscape quality of this LR is likely to be affected due to the potential surface run-off or accidental spillage of chemicals, lubricants and pollution from the construction site during construction stage.	Large	Large
LR2.3	**Plantation**	**Direct Impact:** • Site clearance including removal of existing vegetation • Construction of public housing sites, associate infrastructure works and engineered slope (prior to establishment of planting) **Indirect Impact:** • Potential indirect impacts of construction works	• Housing site development and associated infrastructure works.	**Direct Impact:** • Impact within 500m Assessment Area o Approximately **11.7%** (1.75 ha out of 14.96 ha) of this LR will be affected. • Impact within Study Area o Approximately **97%** (1.7 ha out of 1.75 ha) of this LR will be affected. • The affected area of this LR would be irreversible and permanently alienated by the proposed works respectively. • Adverse impact. • Poor compatibility of the proposed housing site development with the surrounding landscape context. • Those affected vegetation are proposed to be removed which include common exotic plantation woodland trees, plantation trees on man-made slope, shrubs and herbs. The affected trees are dominated by *Acacia confusa* and *Melia azedarach*, *Eucalyptus citriodora, Acacia confusa, Leucaena leucocephala, Casuarina equisetifolia* and *Bambusa sp.* which are the mixed of heavy standard size and semi-mature size. Other affected vegetation including ornamental shrub *Calliandra haematocephala*, common herb *Dicranopteris pedata, Microstegium ciliatum* and *Cyclosorus interruptus* and woody plant *Bridelia tomentosa.* Those vegetation are the mixed of young and middle aged. • Some rare species found at the proposed Site SKI-2 will also be affected and will be further discussed in **LR2.9 Important Trees & Rare and Precious Species.** • The unmitigated impacts during construction stage are the same as the unmitigated impacts during operation stage.		

Id No.	Landscape Resources / Landscape Character Areas	Source of Impact		Description of Impacts [1]	Magnitude of change (Large / Intermediate / Small / Negligible)	
		Construction	Operation		Construction	Operation
				Indirect Impact: • The landscape quality of this LR is likely to be affected due to the potential construction dust and other disturbances arising from construction works during construction stage. • The landscape quality of this LR is likely to be affected due to the potential surface run-off or accidental spillage of chemicals, lubricants and pollution from the construction site during construction stage.	Intermediate	Intermediate
LR2.4	**Shrubland**	**Direct / Indirect Impact:** • No direct / indirect impact on this LR due to no proposed works in this LR	Nil [2]	**Direct / Indirect Impact:** N/A	Negligible	Negligible
LR2.5	**Roadside Planting**	**Direct Impact:** • Site clearance including removal of existing vegetation • Construction of associate infrastructure works (prior to establishment of planting) **Indirect Impact:** • Potential indirect impacts of construction works	• Housing site development and associated infrastructure works.	**Direct Impact:** • Impact within 500m Assessment Area o Approximately 4.34**%** (<0.21 ha out of 4.84 ha) of this LR will be affected. • Impact within Study Area o Approximately **100.0%** (<0.21 ha out of 0.21 ha) of this LR will be affected. • The affected area of this LR would be temporarily alienated by the proposed works respectively. • Those affected vegetation are proposed to be removed which include common shrub and herbs in middle aged. • The unmitigated impacts during construction stage are the same as the unmitigated impacts during operation stage. **Indirect Impact:** • The landscape quality of this LR is likely to be affected due to the potential construction dust and other disturbances arising from construction works during construction stage. • The landscape quality of this LR is likely to be affected due to the potential surface run-off or accidental spillage of chemicals, lubricants and pollution from the construction site during construction stage.	Small	Small

Id No.	Landscape Resources / Landscape Character Areas	Source of Impact		Description of Impacts [1]	Magnitude of change (Large / Intermediate / Small / Negligible)	
		Construction	Operation		Construction	Operation
LR2.6	**Open Space**					
LR2.6a	Open Space at Sheung Ning Playground	**Direct / Indirect Impact:** • No direct / indirect impact on this LR due to no proposed works in this LR	Nil	**Direct / Indirect Impact:** N/A	Negligible	Negligible
LR2.6b	Open Space at Pui Shing Garden	**Direct / Indirect Impact:** • No direct / indirect impact on this LR due to no proposed works in this LR	Nil	**Direct / Indirect Impact:** N/A	Negligible	Negligible
LR2.7	**Semi-natural Watercourse**	**Direct Impact:** • Site clearance including removal of existing vegetation • Construction of public housing sites and engineered slope (prior to establishment of planting) **Indirect Impact:** • Potential indirect impacts of construction works	Nil	**Direct Impact:** • Impact within 500m Assessment Area o Approximately **50.0%** (0.2 km out of 0.4 km) of this LR will be affected. • Impact within Study Area o Approximately **100%** (0.2 km out of 0.2 km) of this LR will be affected. • The affected area of this LR would be irreversible and permanently alienated by the proposed works respectively. • Adverse impact. • Poor compatibility of the proposed housing site development with the surrounding landscape context. • Those affected vegetation are proposed to be removed which include herb *Alocasia macrorrhizos, Boehmeria nivea, Blechnum orientale* and *Microstegium ciliatum.* • The unmitigated impacts during construction stage are the same as the unmitigated impacts during operation stage.		

Id No.	Landscape Resources / Landscape Character Areas	Source of Impact		Description of Impacts [1]	Magnitude of change (Large / Intermediate / Small / Negligible)	
		Construction	Operation		Construction	Operation
				Indirect Impact: • The water quality of this LR is likely to be affected due to the potential construction dust and other disturbances arising from construction works during construction stage. • The water quality of this LR is likely to be affected due to the potential surface run-off or accidental spillage of chemicals, lubricants and pollution from the construction site during construction stage. • The water quality of this LR is likely to be affected due to more human disturbance during operation stage.	Large	Large
LR2.9	**Important Trees & Rare and Precious Species**	**Direct Impact:** • Site clearance including removal of existing vegetation **Indirect Impact:** • Potential surface run-off or accidental spillage of chemicals, lubricants and pollution from the construction site	Nil	**Direct Impact:** • Some rare and precious species are identified at Site SKI-2, which are likely to be affected by the proposed housing development. These include approximately a number of seedlings, saplings, undersized trees, mature trees and approximately 13 nos. of tree *Aquilaria sinensis*, 10 nos. of tree *Keteleeria fortunei,* two individual of shrub *Diospyros vaccinioides*, three individuals of shrub *Pavetta hongkongensis* and three patches of the woody climber *Gnetum luofuense* are found which are proposed to be transplanted. • Permanent and irreversible impact. • Adverse impact. • Poor compatibility of the proposed housing site development with the surrounding landscape context. • The unmitigated impacts during construction stage are the same as the unmitigated impacts during operation stage.	Large	Large
				Indirect Impact: • The landscape quality of this LR is likely to be affected due to the potential construction dust and other disturbances arising from construction works during construction stage. • The landscape quality of this LR is likely to be affected due to the potential surface run-off or accidental spillage of chemicals, lubricants and pollution from the construction site during construction stage.		

Id No.	Landscape Resources / Landscape Character Areas	Source of Impact		Description of Impacts [1]	Magnitude of change (Large / Intermediate / Small / Negligible)	
		Construction	Operation		Construction	Operation
LR2.10	**Sea Waterbody and Coastline**	**Direct / Indirect Impact:** • No direct / indirect impact on this LR due to no proposed works in this LR	Nil	**Direct / Indirect Impact:** N/A	Negligible	Negligible
LCA2.1	**Peaks, Upland and Hillside Landscape**	**Direct Impact:** • Site clearance including removal of existing vegetation • Construction of public housing sites, associate infrastructure works and engineered slope (prior to establishment of planting) **Indirect Impact:** • Potential indirect impacts of construction works	• Housing site development and associated infrastructure works.	**Direct Impact:** • Impact within 500m Assessment Area o Approximately **5.4%** (1.73 ha out of 32.06 ha) of this LR will be affected. • Impact within Study Area o Approximately **100%** (1.73 ha out of 1.73 ha) of this LR will be affected. • The affected area of this LCA at Razor Hill would be irreversible and permanently alienated by the proposed works respectively. • Adverse impact. • Poor compatibility of the proposed housing site development with the surrounding landscape context. • The unmitigated impacts during construction stage are the same as the unmitigated impacts during operation stage. **Indirect Impact:** • The landscape quality of this LCA is likely to be affected due to the potential construction dust and other disturbances arising from construction works during construction stage. • The landscape quality of this LCA is likely to be affected due to the potential surface run-off or accidental spillage of chemicals, lubricants and pollution from the construction site during construction stage.	Large	Large
LCA2.2	**Urban Recreational Landscape**	**Direct / Indirect Impact:** • No direct / indirect impact on this LCA due to no proposed works in this LCA	Nil [2]	**Direct / Indirect Impact:** • N/A	Negligible	Negligible

Id No.	Landscape Resources / Landscape Character Areas	Source of Impact		Description of Impacts [1]	Magnitude of change (Large / Intermediate / Small / Negligible)	
		Construction	Operation		Construction	Operation
LCA2.3	**Unban Peripheral Village Landscape**	**Direct / Indirect Impact:** • No direct / indirect impact on this LCA due to no proposed works in this LCA	Nil	**Direct / Indirect Impact:** • N/A	Negligible	Negligible
LCA2.5	**Miscellaneous Urban Fringe Landscape**	**Direct Impact:** • Site clearance including removal of existing vegetation • Construction of public housing sites, associate infrastructure works and engineered slope (prior to establishment of planting) **Indirect Impact:** • Potential indirect impacts of construction works	• Housing site development and associated infrastructure works.	**Direct Impact:** • Impact within 500m Assessment Area o Approximately **7.53%** (4.09 ha out of 54.32 ha) of this LR will be affected. • Impact within Study Area o Approximately **100%** (4.09 ha out of 4.09 ha) of this LR will be affected. • The affected area of this LCA near to Tseung Kwan O Upper Village would be temporarily and permanently alienated by the proposed works respectively. • The unmitigated impacts during construction stage are the same as the unmitigated impacts during operation stage. **Indirect Impact:** • The landscape quality of this LCA is likely to be affected due to the potential construction dust and other disturbances arising from construction works during construction stage. • The landscape quality of this LCA is likely to be affected due to the potential surface run-off or accidental spillage of chemicals, lubricants and pollution from the construction site during construction stage.	Intermediate	Small
LCA2.6	**Residential Urban Landscape**	**Direct / Indirect Impact:** • No direct / indirect impact on this LCA due to no proposed works in this LCA	Nil	**Direct / Indirect Impact:** • N/A	Negligible	Negligible
LCA2.7	**Mixed Modern Comprehensive Urban Development Landscape**	**Direct / Indirect Impact:** • No direct / indirect impact on this LCA due to no proposed works in this LCA	Nil	**Direct / Indirect Impact:** • N/A	Negligible	Negligible

Note:

[1] The above figure of areas are rounded to the one decimal place. The numbers of trees are approximate number only which quoted were based on the board bush tree survey in Appendix A. The above figure of numbers of trees are rounded to the nearest tens place.

[2] As the area will be used as a temporary works area, there will not be a direct operational impact on the LRs / LCAs. However, there might be insubstantial residual impact resulting from site clearance.

[3] The affected LR2.7 semi-natural watercourse is illustrated in Figure 7.1.11. Please refer to ecology section in Preliminary Environmental Study Reports for details.

[4] N/A - Not applicable

[5] The affected area of the LRs / LCAs within 500 m Assessment Area are indicated on Figure 5.1.2 and Figure 5.3.2. Photo views illustrating the affected area of the LRs / LCAs within 500 m Assessment Area are illustrated in Figure 5.2.2 and Figure 5.4.2.

Table 6.5: Landscape Impacts of the Proposed Works at Site SKI-6

Id No.	Landscape Resources / Landscape Character Areas	Source of Impact		Description of Impacts [1]	Magnitude of change (Large / Intermediate / Small / Negligible)	
		Construction	Operation		Construction	Operation
LR6.1	**Woodland**	**Direct / Indirect Impact:** • No direct / indirect impact on this LR due to no proposed works in this LR	Nil	**Direct / Indirect Impact:** N/A	Negligible	Negligible
LR6.2	**Shrubland / Grassland**	**Direct / Indirect Impact:** • No direct / indirect impact on this LR due to no proposed works in this LR	Nil	**Direct / Indirect Impact:** N/A	Negligible	Negligible
LR6.3	**Plantation**	**Direct Impact:** • Site clearance including removal of existing vegetation • Construction of public housing sites (prior to establishment of planting) **Indirect Impact:** • Potential indirect impacts of construction works	• Housing site development and associated infrastructure works.	**Direct Impact:** • Impact within 500m Assessment Area o Approximately **2.17%** (0.2 ha out of 9.2 ha) of this LR will be affected. • Impact within Study Area o Approximately **100%** (0.2 ha out of 0.2 ha) of this LR will be affected. • The affected area of this LR would be temporarily and permanently alienated by the proposed works respectively. • Those affected vegetation are proposed to be removed which include common exotic plantation trees *Acacia confusa, Macaranga tanarius* var. *tomentosa* and *Leucaena leucocephala.* Those affected trees are the mixed of heavy standard size and semi-mature size. • The unmitigated impacts during construction stage are the same as the unmitigated impacts during operation stage. **Indirect Impact:** • The landscape quality of this LR is likely to be affected due to the potential construction dust and other disturbances arising from construction works during construction stage. • The landscape quality of this LR is likely to be affected due to the potential surface run-off or accidental spillage of chemicals, lubricants and pollution from the construction site during construction stage.	intermediate	intermediate

Id No.	Landscape Resources / Landscape Character Areas	Source of Impact		Description of Impacts [1]	Magnitude of change (Large / Intermediate / Small / Negligible)	
		Construction	Operation		Construction	Operation
LR6.5	**Roadside Planting**	**Direct / Indirect Impact:** • No direct / indirect impact on this LR due to no proposed works in this LR	Nil	**Direct / Indirect Impact:** N/A	Negligible	Negligible
LR6.6	**Open Space**					
LR6.6a	Open Space at Pui Shing Garden	**Direct / Indirect Impact:** • No direct / indirect impact on this LR due to no proposed works in this LR	Nil	**Direct / Indirect Impact:** N/A	Negligible	Negligible
LR6.6b	Open Space at Hang Hau Garden	**Direct / Indirect Impact:** • No direct / indirect impact on this LR due to no proposed works in this LR	Nil	**Direct / Indirect Impact:** N/A	Negligible	Negligible
LR6.6c	Open Space at Hang Hau Man Kuk Lane Park	**Direct / Indirect Impact:** • No direct / indirect impact on this LR due to no proposed works in this LR	Nil	**Direct / Indirect Impact:** N/A	Negligible	Negligible
LR6.6d	Open Space at Tseung Kwan O Sports Ground	**Direct / Indirect Impact:** • No direct / indirect impact on this LR due to no proposed works in this LR	Nil	**Direct / Indirect Impact:** N/A	Negligible	Negligible
LR6.6e	Open Space at Hong Kong Velodrome Park	**Direct / Indirect Impact:** • No direct / indirect impact on this LR due to no proposed works in this LR	Nil	**Direct / Indirect Impact:** N/A	Negligible	Negligible
LR6.9	**Important Trees & Rare and Precious Species**	**Direct / Indirect Impact:** • No direct / indirect impact on this LR due to no proposed works in this LR	Nil	**Direct Impact:** • N/A	Negligible	Negligible

Id No.	Landscape Resources / Landscape Character Areas	Source of Impact		Description of Impacts [1]	Magnitude of change (Large / Intermediate / Small / Negligible)	
		Construction	Operation		Construction	Operation
				Indirect Impact: • N/A		
LR6.11	**Grassland**	**Direct Impact:** • Site clearance including removal of existing vegetation • Construction of public housing sites (prior to establishment of planting) **Indirect Impact:** • Potential indirect impacts of construction works	• Housing site development and associated infrastructure works.	**Direct Impact:** • Impact within Study Area o Approximately **100%** (0.1 ha out of 0.1 ha) of this LR will be affected. • The affected area of this LR would be temporarily and permanently alienated by the proposed works respectively. • Those affected vegetation are proposed to be removed which include common grass *Cynodon dactylon*. Those vegetation is middle age. • The unmitigated impacts during construction stage are the same as the unmitigated impacts during operation stage. **Indirect Impact:** • The landscape quality of this LR is likely to be affected due to the potential construction dust and other disturbances arising from construction works during construction stage. • The landscape quality of this LR is likely to be affected due to the potential surface run-off or accidental spillage of chemicals, lubricants and pollution from the construction site during construction stage	Large	Large
LCA6.2	**Urban Recreational Landscape**	**Direct / Indirect Impact:** • No direct / indirect impact on this LCA due to no proposed works in this LCA	Nil	**Direct / Indirect Impact:** • N/A	Negligible	Negligible

Id No.	Landscape Resources / Landscape Character Areas	Source of Impact		Description of Impacts [1]	Magnitude of change (Large / Intermediate / Small / Negligible)	
		Construction	Operation		Construction	Operation
LCA6.5	**Miscellaneous Urban Fringe Landscape**	**Direct Impact:** • Site clearance including removal of existing vegetation • Construction of public housing sites and engineered slope (prior to establishment of planting) **Indirect Impact:** • Potential indirect impacts of construction works	• Housing site development and associated infrastructure works.	**Direct Impact:** • Impact within 500m Assessment Area o Approximately **0.72%** (0.4 ha out of 55.8 ha) of this LR will be affected. • Impact within Study Area o Approximately **100%** (0.4 ha out of 0.4 ha) of this LR will be affected. • The affected area of this LCA at the north of Pak Shing Kok would be temporarily and permanently alienated by the proposed works respectively. • The unmitigated impacts during construction stage are the same as the unmitigated impacts during operation stage. **Indirect Impact:** • The landscape quality of this LCA is likely to be affected due to the potential construction dust and other disturbances arising from construction works during construction stage. • The landscape quality of this LCA is likely to be affected due to the potential surface run-off or accidental spillage of chemicals, lubricants and pollution from the construction site during construction stage.	Small	Small
LCA6.6	**Residential Urban Landscape**	**Direct / Indirect Impact:** • No direct / indirect impact on this LCA due to no proposed works in this LCA	Nil	**Direct / Indirect Impact:** • N/A	Negligible	Negligible
LCA6.7	**Mixed Modern Comprehensive Urban Development Landscape**	**Direct / Indirect Impact:** • No direct / indirect impact on this LCA due to no proposed works in this LCA	Nil	**Direct / Indirect Impact:** • N/A	Negligible	Negligible

Note:

[1] The above figure of areas are rounded to the one decimal place. The numbers of trees are approximate number only which quoted were based on the board bush tree survey in Appendix A. The above figure of numbers of trees are rounded to the nearest tens place.

[2] As the area will be used as a temporary works area, there will not be a direct operational impact on the LRs / LCAs. However, there might be insubstantial residual impact resulting from site clearance.

[3] N/A - Not applicable

[4] The affected area of the LRs / LCAs within 500 m Assessment Area are indicated on **Figure 5.1.5** and **Figure 5.3.5**. Photo views illustrating the affected area of the LRs / LCAs within 500 m Assessment Area are illustrated in **Figure 5.2.5** and **Figure 5.4.5.**

Table 6.6: Landscape Impacts of the Proposed Works at Site SKI-11

Id No.	Landscape Resources / Landscape Character Areas	Source of Impact		Description of Impacts [1]	Magnitude of change (Large / Intermediate / Small / Negligible)	
		Construction	Operation		Construction	Operation
LR11.1	**Woodland**	**Direct Impact:** • Site clearance including removal of existing vegetation • Construction of public housing sites, associate infrastructure works and engineered slope (prior to establishment of planting) **Indirect Impact:** • Potential indirect impacts of construction works	• Housing site development and associated infrastructure works.	**Direct Impact:** • Impact within 500m Assessment Area o Approximately **4.12%** (2.2 ha out of 53.4 ha) of this LR will be affected. • Impact within Study Area o Approximately **100%** (2.2 ha out of 2.2 ha) of this LR will be affected. • The affected area of this LR would be irreversible and permanently alienated by the proposed works respectively. • Adverse impact. • Poor compatibility of the proposed housing site development with the surrounding landscape context. • Those affected vegetation are proposed to be removed which include native woodland common species tree *Sterculia lanceolata, Cinnamomum camphora, Ficus hispida*, *Microcos nervosa* and *Mallotus paniculatus*, shrub *Psychotria asiatica*, and herb *Alocasia macrorrhizos* and *Lophatherum gracile*. Those affected vegetation are the mixed of young to middle-aged. • Some rare species found at the proposed Site SKI-11 will also be affected and will be further discussed in **LR11.9 Important Trees & Rare and Precious Species.** • The unmitigated impacts during construction stage are the same as the unmitigated impacts during operation stage. • 2.43 ha of woodland compensation within 500m of the Site SKI-11 are proposed for compensation, and are presented in Figure 7.2.5. **Indirect Impact:** • The landscape quality of this LR is likely to be affected due to the potential construction dust and other disturbances arising from construction works during construction stage. • The landscape quality of this LR is likely to be affected due to the potential surface run-off or accidental spillage of chemicals, lubricants and pollution from the construction site during construction stage.	Large	Large

Id No.	Landscape Resources / Landscape Character Areas	Source of Impact		Description of Impacts [1]	Magnitude of change (Large / Intermediate / Small / Negligible)	
		Construction	Operation		Construction	Operation
LR11.3	**Plantation**	**Direct Impact:** • Site clearance including removal of existing vegetation • Construction of public housing sites, associate infrastructure works and engineered slope (prior to establishment of planting) **Indirect Impact:** • Potential indirect impacts of construction works	• Housing site development and associated infrastructure works.	**Direct Impact:** • Impact within 500m Assessment Area o Approximately **13.21%** (0.7 ha out of 5.3 ha) of this LR will be affected. • Impact within Study Area o Approximately **100%** (0.7 ha out of 0.7 ha) of this LR will be affected. • The affected area of this LR would be permanent and irreversible alienated by the proposed works respectively. • Adverse impact. • Poor compatibility of the proposed housing site development with the surrounding landscape context. • Those affected vegetation are proposed to be removed which include common trees *Acacia confusa* and *A. auriculiformis*, *Machilus pauhoi, Bridelia tomentosa, Schefflera heptaphylla*, shrub *Psychotria asiatica, Ilex asprella, Embelia laeta* and herb *Dicranopteris pedata, Lophatherum gracile* and *Cyclosorus parasiticus*. Those affected vegetation are the mixed of heavy standard size and semi-mature size. • Some rare species found at the proposed Site SKI-11 will also be affected and will be further discussed in **LR11.9 Important Trees & Rare and Precious Species.** • The unmitigated impacts during construction stage are the same as the unmitigated impacts during operation stage. **Indirect Impact:** • The landscape quality of this LR is likely to be affected due to the potential construction dust and other disturbances arising from construction works during construction stage. • The landscape quality of this LR is likely to be affected due to the potential surface run-off or accidental spillage of chemicals, lubricants and pollution from the construction site during construction stage.	Intermediate	Intermediate

Id No.	Landscape Resources / Landscape Character Areas	Source of Impact		Description of Impacts [1]	Magnitude of change (Large / Intermediate / Small / Negligible)	
		Construction	Operation		Construction	Operation
LR11.4	**Shrubland**	**Direct / Indirect Impact:** • No direct / indirect impact on this LR due to no proposed works in this LR	Nil	**Direct / Indirect Impact:** N/A	Negligible	Negligible
LR11.5	**Roadside Planting**	**Direct / Indirect Impact:** • No direct / indirect impact on this LR due to no proposed works in this LR	Nil	**Direct / Indirect Impact:** N/A	Negligible	Negligible
LR11.6a	Open Space at Yau Yue Wan	**Direct / Indirect Impact:** • No direct / indirect impact on this LR due to no proposed works in this LR	Nil	**Direct / Indirect Impact:** N/A	Negligible	Negligible
LR11.6b	Open Space at Po Tsui Park	**Direct / Indirect Impact:** • No direct / indirect impact on this LR due to no proposed works in this LR	Nil	**Direct / Indirect Impact:** N/A	Negligible	Negligible
LR11.7	**Semi-natural Watercourse**	**Direct / Indirect Impact:** • No direct / indirect impact on this LR due to no proposed works in this LR	Nil	**Direct / Indirect Impact:** N/A	Negligible	Negligible

Id No.	Landscape Resources / Landscape Character Areas	Source of Impact		Description of Impacts [1]	Magnitude of change (Large / Intermediate / Small / Negligible)	
		Construction	Operation		Construction	Operation
LR11.9	**Important Trees & Rare and Precious Species**	**Direct Impact:** • Site clearance including removal of existing vegetation **Indirect Impact:** • Potential surface run-off or accidental spillage of chemicals, lubricants and pollution from the construction site	• Housing site development and associated infrastructure works.	• Some rare and precious species are identified at Site SKI-11, which are likely to be affected by the proposed housing development. These include approximately two mature trees, one young tree and some seedlings of *Aquilaria sinensis* and woody climber *Gnetum luofuense* which are proposed to be transplanted. • Permanent and irreversible impact. • Adverse impact. • Poor compatibility of the proposed housing site development with the surrounding landscape context. • The unmitigated impacts during construction stage are the same as the unmitigated impacts during operation stage. **Indirect Impact:** • The landscape quality of this LR is likely to be affected due to the potential construction dust and other disturbances arising from construction works during construction stage. • The landscape quality of this LR is likely to be affected due to the potential surface run-off or accidental spillage of chemicals, lubricants and pollution from the construction site during construction stage.	Large	Large

Id No.	Landscape Resources / Landscape Character Areas	Source of Impact		Description of Impacts [1]	Magnitude of change (Large / Intermediate / Small / Negligible)	
		Construction	Operation		Construction	Operation
LCA11.1	**Peaks, Upland and Hillside Landscape**	**Direct Impact:** • Site clearance including removal of existing vegetation • Construction of public housing sites and engineered slope (prior to establishment of planting) **Indirect Impact:** • Potential indirect impacts of construction works	• Housing site development and associated infrastructure works.	**Direct Impact:** • Impact within 500m Assessment Area o Approximately **3.48%** (2.1 ha out of 60.3 ha) of this LR will be affected. • Impact within Study Area o Approximately **100%** (2.1 ha out of 2.1 ha) of this LR will be affected. • The affected area of this LCA at Razor Hill would be irreversible and permanently alienated by the proposed works respectively. • Adverse impact. • Poor compatibility of the proposed housing site development with the surrounding landscape context. • The unmitigated impacts during construction stage are the same as the unmitigated impacts during operation stage. **Indirect Impact:** • The landscape quality of this LCA is likely to be affected due to the potential construction dust and other disturbances arising from construction works during construction stage. • The landscape quality of this LCA is likely to be affected due to the potential surface run-off or accidental spillage of chemicals, lubricants and pollution from the construction site during construction stage.	Large	Large
LCA11.2	**Urban Recreational Landscape**	**Direct / Indirect Impact:** • No direct / indirect impact on this LCA due to no proposed works in this LCA	Nil	**Direct / Indirect Impact:** • N/A	Negligible	Negligible
LCA11.3	**Unban Peripheral Village Landscape**	**Direct / Indirect Impact:** • No direct / indirect impact on this LCA due to no proposed works in this LCA	Nil	**Direct / Indirect Impact:** • N/A	Negligible	Negligible

Id No.	Landscape Resources / Landscape Character Areas	Source of Impact		Description of Impacts [1]	Magnitude of change (Large / Intermediate / Small / Negligible)	
		Construction	Operation		Construction	Operation
LCA11.5	**Miscellaneous Urban Fringe Landscape**	**Direct Impact:** • Site clearance including removal of existing vegetation • Construction of public housing sites and engineered slope (prior to establishment of planting) **Indirect Impact:** • Potential indirect impacts of construction works	• Housing site development and associated infrastructure works.	**Direct Impact:** • Impact within 500m Assessment Area o Approximately **3.7%** (0.9 ha out of 24.3 ha) of this LR will be affected. • Impact within Study Area o Approximately **100%** (0.9 ha out of 0.9 ha) of this LR will be affected. • The affected area of this LCA at Razor Hill would be temporarily and permanently alienated by the proposed works respectively. • The unmitigated impacts during construction stage are the same as the unmitigated impacts during operation stage. **Indirect Impact:** • The landscape quality of this LCA is likely to be affected due to the potential construction dust and other disturbances arising from construction works during construction stage. • The landscape quality of this LCA is likely to be affected due to the potential surface run-off or accidental spillage of chemicals, lubricants and pollution from the construction site during construction stage.	Intermediate	Small
LCA11.6	**Residential Urban Landscape**	**Direct / Indirect Impact:** • No direct / indirect impact on this LCA due to no proposed works in this LCA	Nil	**Direct / Indirect Impact:** • N/A	Negligible	Negligible
LCA11.7	**Mixed Modern Comprehensive Urban Development Landscape**	**Direct / Indirect Impact:** • No direct / indirect impact on this LCA due to no proposed works in this LCA	Nil	**Direct / Indirect Impact:** • N/A	Negligible	Negligible

Note:

[1] The above figure of areas are rounded to the one decimal place. The numbers of trees are approximate number only which quoted were based on the board bush tree survey in Appendix A. The above figure of numbers of trees are rounded to the nearest tens place.

[2] As the area will be used as a temporary works area, there will not be a direct operational impact on the LRs / LCAs. However, there might be insubstantial residual impact resulting from site clearance.

[3] N/A - Not applicable

[4] The affected area of the LRs / LCAs within 500 m Assessment Area are indicated on **Figure 5.1.5** and **Figure 5.3.5**. Photo views illustrating the affected area of the LRs / LCAs within 500 m Assessment Area are illustrated in **Figure 5.2.5** and **Figure 5.4.5.**

Table 6.7: Landscape Impacts of the Proposed Works at Site SKI-12

Id No.	Landscape Resources / Landscape Character Areas	Source of Impact		Description of Impacts [1]	Magnitude of change (Large / Intermediate / Small / Negligible)	
		Construction	Operation		Construction	Operation
LR12.1	**Woodland**	**Direct Impact:** • Site clearance including removal of existing vegetation • Construction of public housing sites (prior to establishment of planting) **Indirect Impact:** • Potential indirect impacts of construction works	• Housing site development and associated infrastructure works.	**Direct Impact:** • Impact within 500m Assessment Area o Approximately **3.68%** (1.75 ha out of 47.5 ha) of this LR will be affected. • Impact within Study Area o Approximately **97%** (1.75 ha out of 1.8 ha) of this LR will be affected. • The affected area of this LR would be irreversible and permanently alienated by the proposed works respectively. • Adverse impact. • Poor compatibility of the proposed housing site development with the surrounding landscape context. • Those affected vegetation are proposed to be removed which include native woodland common species tree *Acacia confusa, Aporosa dioica, Archidendron clypearia, Cinnamomum camphora, Lithocarpus glaber, Machilus chekiangensis, Mallotus paniculatus, Polyspora axillaris and Macaranga tanarius var. tomentosa.* Those affected trees are the mixed of young to middle-aged. • Some rare species found at the proposed Site SKI-12 will also be affected and will be further discussed in **LR12.9 Important Trees & Rare and Precious Species.** • The unmitigated impacts during construction stage are the same as the unmitigated impacts during operation stage. • Approximately 1.8 ha of woodland compensation within 500m of the Site SKI-12 are proposed for compensation, and are presented in Figure 7.2.6. **Indirect Impact:** • The landscape quality of this LR is likely to be affected due to the potential construction dust and other disturbances arising from construction works during construction stage. • The landscape quality of this LR is likely to be affected due to the potential surface run-off or accidental spillage of chemicals, lubricants and pollution from the construction site during construction stage.	Large	Large

Id No.	Landscape Resources / Landscape Character Areas	Source of Impact		Description of Impacts [1]	Magnitude of change (Large / Intermediate / Small / Negligible)	
		Construction	Operation		Construction	Operation
LR12.2	**Shrubland / Grassland**	**Direct / Indirect Impact:** • No direct / indirect impact on this LR due to no proposed works in this LR	Nil	**Direct / Indirect Impact:** N/A	Negligible	Negligible
LR12.3	**Plantation**	**Direct / Indirect Impact:** • No direct / indirect impact on this LR due to no proposed works in this LR	Nil	**Direct / Indirect Impact:** N/A	Negligible	Negligible
LR12.6	**Open Space**	**Direct / Indirect Impact:** • No direct / indirect impact on this LR due to no proposed works in this LR	Nil	**Direct / Indirect Impact:** N/A	Negligible	Negligible
LR12.7	**Semi-natural Watercourse**	**Direct / Indirect Impact:** • No direct / indirect impact on this LR due to no proposed works in this LR	Nil	**Direct / Indirect Impact:** N/A	Negligible	Negligible
LR12.8	**Channelized Watercourse**	**Direct / Indirect Impact:** • No direct / indirect impact on this LR due to no proposed works in this LR	Nil	**Direct / Indirect Impact:** N/A	Negligible	Negligible

Id No.	Landscape Resources / Landscape Character Areas	Source of Impact		Description of Impacts [1]	Magnitude of change (Large / Intermediate / Small / Negligible)	
		Construction	Operation		Construction	Operation
LR12.9	**Important Trees & Rare and Precious Species**	**Direct Impact:** • Site clearance including removal of existing vegetation **Indirect Impact:** • Potential surface run-off or accidental spillage of chemicals, lubricants and pollution from the construction site	• Housing site development and associated infrastructure works.	• Some rare and precious species are identified at Site SKI-12, which are likely to be affected by the proposed housing development. These include approximately 1 no. of tree *Aquilaria sinensis*, at least 1 no. of tree *Ormosia pachycarpa*, 2 nos. of shrub *Diospyros vaccinioides* , 1 no of shrub *Pavetta hongkongensis*, a patch of woody climber *Gnetum luofuense* are found which are proposed to be transplanted. • Permanent and irreversible impact. • Adverse impact. • Poor compatibility of the proposed housing site development with the surrounding landscape context. • The unmitigated impacts during construction stage are the same as the unmitigated impacts during operation stage. **Indirect Impact:** • The landscape quality of this LR is likely to be affected due to the potential construction dust and other disturbances arising from construction works during construction stage. • The landscape quality of this LR is likely to be affected due to the potential surface run-off or accidental spillage of chemicals, lubricants and pollution from the construction site during construction stage.	Large	Large

Id No.	Landscape Resources / Landscape Character Areas	Source of Impact		Description of Impacts [1]	Magnitude of change (Large / Intermediate / Small / Negligible)	
		Construction	Operation		Construction	Operation
LR12.11	**Grassland**	**Direct Impact:** • Site clearance including removal of existing vegetation • Construction of public housing sites (prior to establishment of planting) **Indirect Impact:** • Potential indirect impacts of construction works	• Housing site development and associated infrastructure works.	**Direct Impact:** • Impact within 500m Assessment Area o Approximately **3.03%** (0.5 ha out of 16.5 ha) of this LR will be affected. • Impact within Study Area o Approximately **100%** (0.5 ha out of 0.5 ha) of this LR will be affected. • The affected area of this LR would be temporarily alienated by the proposed works respectively. • Those affected vegetation are proposed to be removed which include grass *Imperata cylindrica* var. *major, Cynodon dactylon* and *Panicum maximum* and herb *Bidens alba, and* ornamental shrubs *Bougainvillea glabra* and *Duranta erecta.* • The unmitigated impacts during construction stage are the same as the unmitigated impacts during operation stage. **Indirect Impact:** • The landscape quality of this LR is likely to be affected due to the potential construction dust and other disturbances arising from construction works during construction stage. • The landscape quality of this LR is likely to be affected due to the potential surface run-off or accidental spillage of chemicals, lubricants and pollution from the construction site during construction stage	Small	Small

Id No.	Landscape Resources / Landscape Character Areas	Source of Impact		Description of Impacts [1]	Magnitude of change (Large / Intermediate / Small / Negligible)	
		Construction	Operation		Construction	Operation
LCA12.1	**Peaks, Upland and Hillside Landscape**	**Direct Impact:** • Site clearance including removal of existing vegetation • Construction of public housing sites and engineered slope (prior to establishment of planting) **Indirect Impact:** Potential indirect impacts of construction works	• Housing site development and associated infrastructure works.	**Direct Impact:** • Impact within 500m Assessment Area o Approximately **4.69%** (2.1 ha out of 44.8 ha) of this LR will be affected. • Impact within Study Area o Approximately **100%** (2.1 ha out of 2.1 ha) of this LR will be affected. • The affected area of this LCA at Siu Chik Shan would be temporarily and permanently alienated by the proposed works respectively. • Adverse impact. • Poor compatibility of the proposed housing site development with the surrounding landscape context. • The unmitigated impacts during construction stage are the same as the unmitigated impacts during operation stage. **Indirect Impact:** • The landscape quality of this LCA is likely to be affected due to the potential construction dust and other disturbances arising from construction works during construction stage. • The landscape quality of this LCA is likely to be affected due to the potential surface run-off or accidental spillage of chemicals, lubricants and pollution from the construction site during construction stage.	large	large
LCA12.5	**Miscellaneous Urban Fringe Landscape**	**Direct / Indirect Impact:** No direct / indirect impact on this LCA due to no proposed works in this LCA	Nil	**Direct / Indirect Impact:** • N/A	Negligible	Negligible

Id No.	Landscape Resources / Landscape Character Areas	Source of Impact		Description of Impacts [1]	Magnitude of change (Large / Intermediate / Small / Negligible)	
		Construction	Operation		Construction	Operation
LCA12.7	**Mixed Modern Comprehensive Urban Development Landscape**	**Direct Impact:** • Site clearance including removal of existing vegetation • Construction of public housing sites and engineered slope (prior to establishment of planting) **Indirect Impact:** • Potential indirect impacts of construction works	• Housing site development and associated infrastructure works.	**Direct Impact:** • Impact within 500m Assessment Area o Approximately **1.42%** (0.3 ha out of 21.2 ha) of this LR will be affected. • Impact within Study Area o Approximately **100%** (0.3 ha out of 0.3 ha) of this LR will be affected. • The affected area of this LCA at Siu Chik Shan would be temporarily and permanently alienated by the proposed works respectively. • The unmitigated impacts during construction stage are the same as the unmitigated impacts during operation stage. **Indirect Impact:** • The landscape quality of this LCA is likely to be affected due to the potential construction dust and other disturbances arising from construction works during construction stage. • The landscape quality of this LCA is likely to be affected due to the potential surface run-off or accidental spillage of chemicals, lubricants and pollution from the construction site during construction stage.	Small	Small
LCA12.9	**Ongoing Major Development Landscape**	**Direct / Indirect Impact:** • No direct / indirect impact on this LCA due to no proposed works in this LCA	Nil	**Direct / Indirect Impact:** • N/A	Negligible	Negligible

Note:

[1] The above figure of areas are rounded to the one decimal place. The numbers of trees are approximate number only which quoted were based on the board bush tree survey in Appendix A. The above figure of numbers of trees are rounded to the nearest tens place.

[2] As the area will be used as a temporary works area, there will not be a direct operational impact on the LRs / LCAs. However, there might be insubstantial residual impact resulting from site clearance.

[4] N/A - Not applicable

[5] The affected area of the LRs / LCAs within 500 m Assessment Area are indicated on **Figure 5.1.7** and **Figure 5.3.7**. Photo views illustrating the affected area of the LRs / LCAs within 500 m Assessment Area are illustrated in **Figure 5.2.7** and **Figure 5.4.7.**

Table 6.9: Magnitude of unmitigated Landscape Impacts during Construction and Operation Phases

ID No.	LRs / LCAs	Sources of impacts from the project	Physical extent of the impact (Small / Medium / Large)	Compatibility with Surrounding Landscape (Good / Fair / Poor)		Duration of Impact (Temporary / Permanent)		Reversibility of change (Reversible / Irreversible)		Magnitude 'of change (Large / Intermediate/ Small / Negligible)	
				Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operation
Site SKI-1											
LR1.1	Woodland	Site clearance Construction of public housing sites (4 no. Blocks, 37-40 no. Storeys), associate infrastructure works and engineered slope	Approximately 93 % (2.1 ha out of 2.26 ha) of this LR will be affected. Approximately 80 % (80 m out of 100 m) of Little Hawaii Trail will be affected.	Poor	Poor	permanent	permanent	Irreversible	Irreversible	Large	Large
LR1.2	Shrubland / Grassland	Nil	Nil	N/A	N/A	N/A	N/A	N/A	N/A	Negligible	Negligible
LR1.3	Plantation	Site clearance Construction of public housing sites (4 no. Blocks, 37-40 no. Storeys), associate infrastructure works and engineered slope	Approximately 100% (2.11 ha out of 2.11 ha) of this LR will be affected.	Poor	Poor	permanent	permanent	Irreversible	Irreversible	Large	Large

LR1.4	Shrubland	Nil	Nil	N/A	N/A	N/A	N/A	N/A	N/A	Negligible	Negligible
LR1.5	Roadside Planting	Nil	Nil	N/A	N/A	N/A	N/A	N/A	N/A	Negligible	Negligible
LR1.6	Open Space at Po Tsui Park	Nil	Nil	N/A	N/A	N/A	N/A	N/A	N/A	Negligible	Negligible
LR1.7	Semi-natural Watercourse	Site clearance Construction of public housing sites (4 no. Blocks, 37-40 no. Storeys), associate infrastructure works and engineered slope	Approximately 100% (0.1 km out of 0.1 km) of this LR will be affected.	Poor	Poor	permanent	permanent	Irreversible	Irreversible	Large	Large
LR1.8	Channelised Watercourse	the potential surface run-off or accidental spillage of chemicals, lubricants and pollution from the construction site	Nil	fair	N/A	temporary	N/A	reversible	N/A	small	Negligible
LR1.9	Important Trees & Rare and Precious Species	Site clearance including removal of existing vegetation	Some rare and precious species are identified at Site SKI-1, which are likely to be affected by the proposed housing development. These include approximately	Poor	Poor	permanent	permanent	Irreversible	Irreversible	Large	Large

			30 nos. of tree *Aquilaria sinensis*, a group of seedlings of tree *Aquilaria sinensis*, at least 30 nos. of tree *Pyrenaria spectabilis* and 1 no. of shrub *Pavetta hongkongensis* are found which are proposed to be transplanted.								
LCA1.1	Peaks, Upland and Hillside Landscape	Site clearance Construction of public housing sites (4 no. Blocks, 37-40 no. Storeys), associate infrastructure works and engineered slope	Approximately 100% (4.13 ha out of 4.13 ha) of this LR will be affected.	Poor	Poor	Permanent	Permanent	Irreversible	Irreversible	Large	Large
LCA1.2	Urban Recreational Landscape	Nil	Nil	N/A	N/A	N/A	N/A	N/A	N/A	Negligible	Negligible
LCA1.4	Miscellaneous Rural Fringe Landscape	Nil	Nil	N/A	N/A	N/A	N/A	N/A	N/A	Negligible	Negligible
LCA1.5	Miscellaneous Urban Fringe Landscape	Site clearance Construction of public housing sites (4 no.	Approximately 100% (0.5 ha out of 0.5 ha) of this LR	Fair	Fair	Permanent	Permanent	Irreversible	Irreversible	Small	Small

		Blocks, 37-40 no. Storeys), associate infrastructure works and engineered slope	will be affected.								
LCA1.6	Residential Urban Landscape	Nil	Nil	N/A	N/A	N/A	N/A	N/A	N/A	Negligible	Negligible
Site SKI-2											
LR2.1	Woodland	Site clearance Construction of public housing sites (2 no. Blocks, 40 no. Storeys), associate infrastructure works and engineered slope	Approximately 100% (1.7 ha out of 1.7ha) of this LR will be affected.	Poor	Poor	permanent	permanent	Irreversible	Irreversible	Large	Large
LR2.3	Plantation	Site clearance Construction of public housing sites (2 no. Blocks, 40 no. Storeys), associate infrastructure works and engineered slope	Approximately 97% (1.7 ha out of 1.75 ha) of this LR will be affected.	Poor	Poor	permanent	permanent	Irreversible	Irreversible	Intermediate	Intermediate
LR2.4	Shrubland	Nil	Nil	N/A	N/A	N/A	N/A	N/A	N/A	Negligible	Negligible

LR2.5	Roadside Planting	Site clearance Construction of public housing sites (2 no. Blocks, 40 no. Storeys), associate infrastructure works and engineered slope	Approximately 100.0% (<0.21 ha out of 0.21 ha) of this LR will be affected.	Fair	Fair	permanent	permanent	Irreversible	Irreversible	Small	Small
LR2.6a	Open Space at Sheung Ning Playground	Nil	Nil	N/A	N/A	N/A	N/A	N/A	N/A	Negligible	Negligible
LR2.6b	Open Space at Pui Shing Garden	Nil	Nil	N/A	N/A	N/A	N/A	N/A	N/A	Negligible	Negligible
LR2.7	Semi-natural Watercourse	Site clearance Construction of public housing sites (2 no. Blocks, 40 no. Storeys), associate infrastructure works and engineered slope	Approximately 100% (less than 0.2 km out of 0.2 km) of this LR will be affected.	Poor	Poor	permanent	permanent	Irreversible	Irreversible	Large	Large
LR2.9	Important Trees & Rare and Precious Species	Site clearance Construction of public housing sites (2 no. Blocks, 40 no. Storeys), associate infrastructure	Some rare and precious species are identified at Site SKI-2, which are likely to be affected by the proposed housing development.	Poor	Poor	permanent	permanent	Irreversible	Irreversible	Large	Large

		works and engineered slope	These include approximately a number of seedlings, saplings, undersized trees, mature trees and approximately 13 nos. of tree *Aquilaria sinensis*, 10 nos. of tree *Keteleeria fortunei*, two individual of shrub *Diospyros vaccinioides*, three individuals of shrub *Pavetta hongkongensis* and three patches of the woody climber *Gnetum luofuense* are found which are proposed to be transplanted.								
LR2.10	Sea Waterbody and Coastline	Nil	Nil	N/A	N/A	N/A	N/A	N/A	N/A	Negligible	Negligible
LCA2.1	Peaks, Upland and Hillside Landscape	Site clearance Construction of public housing sites (2 no. Blocks, 40 no. Storeys), associate	Approximately 100% (1.73 ha out of 1.73 ha) of this LR will be affected.	Poor	Poor	permanent	permanent	Irreversible	Irreversible	Large	Large

		infrastructure works and engineered slope									
LCA2.2	Urban Recreational Landscape	Nil	Nil	N/A	N/A	N/A	N/A	N/A	N/A	Negligible	Negligible
LCA2.3	Unban Peripheral Village Landscape	Nil	Nil	N/A	N/A	N/A	N/A	N/A	N/A	Negligible	Negligible
LCA2.5	Miscellaneous Urban Fringe Landscape	Site clearance Construction of public housing sites (2 no. Blocks, 40 no. Storeys), associate infrastructure works and engineered slope	Approximately 100% (4.09 ha out of 4.09 ha) of this LR will be affected.	Fair	Fair	permanent	permanent	Irreversible	Irreversible	Intermediate	Small
LCA2.6	Residential Urban Landscape	Nil	Nil	N/A	N/A	N/A	N/A	N/A	N/A	Negligible	Negligible
LCA2.7	Mixed Modern Comprehensive Urban Development Landscape	Nil	Nil	N/A	N/A	N/A	N/A	N/A	N/A	Negligible	Negligible
Site SKI-6											
LR6.1	Woodland	Nil	Nil	N/A	N/A	N/A	N/A	N/A	N/A	Negligible	Negligible

LR6.2	Shrubland / Grassland	Nil	Nil	N/A	N/A	N/A	N/A	N/A	N/A	Negligible	Negligible
LR6.3	Plantation	Site clearance Construction of public housing sites (1 no. Blocks, 40 no. Storeys), associate infrastructure works	Approximately 100% (0.2 ha out of 0.2 ha) of this LR will be affected.	Poor	Poor	permanent	permanent	Irreversible	Irreversible	intermediate	intermediate
LR6.5	Roadside Planting	Nil	Nil	N/A	N/A	N/A	N/A	N/A	N/A	Negligible	Negligible
LR6.6a	Open Space at Pui Shing Garden	Nil	Nil	n/a	n/a	n/a	n/a	n/a	n/a	Negligible	Negligible
LR6.6b	Open Space at Hang Hau Garden	Nil	Nil	n/a	n/a	n/a	n/a	n/a	n/a	Negligible	Negligible
LR6.6c	Open Space at Hang Hau Man Kuk Lane Park	Nil	Nil	n/a	n/a	n/a	n/a	n/a	n/a	Negligible	Negligible
LR6.6d	Open Space at Tseung Kwan O Sports Ground	Nil	Nil	n/a	n/a	n/a	n/a	n/a	n/a	Negligible	Negligible
LR6.6e	Open Space at Hong Kong Velodrome Park	Nil	Nil	n/a	n/a	n/a	n/a	n/a	n/a	Negligible	Negligible

LR6.9	Important Trees & Rare and Precious Species	Nil	Nil	n/a	n/a	n/a	n/a	n/a	n/a	Negligible	Negligible
LR6.11	Grassland	Site clearance Construction of public housing sites (1 no. Blocks, 40 no. Storeys), associate infrastructure works	Approximately 100% (0.1 ha out of 0.1 ha) of this LR will be affected.	Poor	Poor	Permanent	Permanent	Irreversible	Irreversible	Large	Large
LCA6.2	Urban Recreational Landscape	Nil	Nil	n/a	n/a	n/a	n/a	n/a	n/a	Negligible	Negligible
LCA6.5	Miscellaneous Urban Fringe Landscape	Site clearance Construction of public housing sites (1 no. Blocks, 40 no. Storeys), associate infrastructure works	Approximately 100% (0.4 ha out of 0.4 ha) of this LR will be affected.	Poor	Poor	Permanent	Permanent	Irreversible	Irreversible	Small	Small
LCA6.6	Residential Urban Landscape	Nil	Nil	n/a	n/a	n/a	n/a	n/a	n/a	Negligible	Negligible
LCA6.7	Mixed Modern Comprehensive Urban Development Landscape	Nil	Nil	n/a	n/a	n/a	n/a	n/a	n/a	Negligible	Negligible

Site SKI-11											
LR11.1	Woodland	Site clearance Construction of public housing sites (4 no. Blocks, 38-40 no. Storeys), associate infrastructure works and engineered slope	Approximately 100% (2.2 ha out of 2.2 ha) of this LR will be affected.	Poor	Poor	permanent	permanent	Irreversible	Irreversible	Large	Large
LR11.3	Plantation	Site clearance Construction of public housing sites (4 no. Blocks, 38-40 no. Storeys), associate infrastructure works and engineered slope	Approximately 100% (0.7 ha out of 0.7 ha) of this LR will be affected.	Poor	Poor	permanent	permanent	Irreversible	Irreversible	Intermediate	Intermediate
LR11.4	Shrubland	Nil	Nil	n/a	n/a	n/a	n/a	n/a	n/a	Negligible	Negligible
LR11.5	Roadside Planting	Nil	Nil	n/a	n/a	n/a	n/a	n/a	n/a	Negligible	Negligible
LR11.6a	Open Space at Yau Yue Wan	Nil	Nil	n/a	n/a	n/a	n/a	n/a	n/a	Negligible	Negligible
LR11.6b	Open Space at Po Tsui Park	Nil	Nil	n/a	n/a	n/a	n/a	n/a	n/a	Negligible	Negligible
LR11.7	Semi-natural Watercourse	Nil	Nil	n/a	n/a	n/a	n/a	n/a	n/a	Negligible	Negligible

LR11.9	Important Trees & Rare and Precious Species	Site clearance Construction of public housing sites (4 no. Blocks, 38-40 no. Storeys), associate infrastructure works and engineered slope	Some rare and precious species are identified at Site SKI-11, which are likely to be affected by the proposed housing development. These include approximately two mature trees, one young tree and some seedlings of *Aquilaria sinensis* and woody climber *Gnetum luofuense* which are proposed to be transplanted.	Poor	Poor	permanent	permanent	Irreversible	Irreversible	Large	Large
LCA11.1	Peaks, Upland and Hillside Landscape	Site clearance Construction of public housing sites (4 no. Blocks, 38-40 no. Storeys), associate infrastructure works and engineered slope	Approximately 100% (2.1 ha out of 2.1 ha) of this LR will be affected.	Poor	Poor	permanent	permanent	Irreversible	Irreversible	Large	Large
LCA11.2	Urban Recreational Landscape	Nil	Nil	n/a	n/a	n/a	n/a	n/a	n/a	Negligible	Negligible

LCA11.3	Unban Peripheral Village Landscape	Nil	Nil	n/a	n/a	n/a	n/a	n/a	n/a	Negligible	Negligible
LCA11.5	Miscellaneous Urban Fringe Landscape	Site clearance Construction of public housing sites (4 no. Blocks, 38-40 no. Storeys), associate infrastructure works and engineered slope	Approximately 100% (0.9 ha out of 0.9 ha) of this LR will be affected.	Fair	Fair	permanent	permanent	Irreversible	Irreversible	Intermediate	Small
LCA11.6	Residential Urban Landscape	Nil	Nil	n/a	n/a	n/a	n/a	n/a	n/a	Negligible	Negligible
LCA11.7	Mixed Modern Comprehensive Urban Development Landscape	Nil	Nil	n/a	n/a	n/a	n/a	n/a	n/a	Negligible	Negligible
Site SKI-12											
LR12.1	Woodland	Site clearance Construction of public housing sites (3 no. Blocks, 50 no. Storeys), associate infrastructure works and engineered slope	Approximately 97% (1.75 ha out of 1.8 ha) of this LR will be affected.	Poor	Poor	permanent	permanent	Irreversible	Irreversible	Large	Large
LR12.2	Shrubland / Grassland	Nil	Nil	n/a	n/a	n/a	n/a	n/a	n/a	Negligible	Negligible

LR12.3	Plantation	Nil	Nil	n/a	n/a	n/a	n/a	n/a	n/a	Negligible	Negligible
LR12.6	Open Space	Nil	Nil	n/a	n/a	n/a	n/a	n/a	n/a	Negligible	Negligible
LR12.7	Semi-natural Watercourse	Nil	Nil	n/a	n/a	n/a	n/a	n/a	n/a	Negligible	Negligible
LR12.8	Channelized Watercourse	Nil	Nil	n/a	n/a	n/a	n/a	n/a	n/a	Negligible	Negligible
LR12.9	Important Trees & Rare and Precious Species	Site clearance Construction of public housing sites (3 no. Blocks, 50 no. Storeys), associate infrastructure works and engineered slope	Some rare and precious species are identified at Site SKI-12, which are likely to be affected by the proposed housing development. These include approximately 1 no. of tree *Aquilaria sinensis*, at least 1 no. of tree *Ormosia pachycarpa*, 2 nos. of shrub *Diospyros vaccinioides* , 1 no of shrub *Pavetta hongkongensis*, a patch of woody climber *Gnetum luofuense* are found which are proposed to be transplanted.	Poor	Poor	permanent	permanent	Irreversible	Irreversible	Large	Large

LR 12.11	Grassland	Site clearance Construction of public housing sites (3 no. Blocks, 50 no. Storeys), associate infrastructure works and engineered slope	Approximately 100% (0.5 ha out of 0.5 ha) of this LR will be affected.	Poor	Poor	permanent	permanent	Irreversible	Irreversible	Small	Small
LCA 12.1	Peaks, Upland and Hillside Landscape	Site clearance Construction of public housing sites (3 no. Blocks, 50 no. Storeys), associate infrastructure works and engineered slope	Approximately 100% (2.1 ha out of 2.1 ha) of this LR will be affected.	Poor	Poor	permanent	permanent	Irreversible	Irreversible	intermediate	intermediate
LCA 12.5	Miscellaneous Urban Fringe Landscape	Nil	Nil	N/A	N/A	N/A	N/A	N/A	N/A	Negligible	Negligible
LCA 12.7	Mixed Modern Comprehensive Urban Development Landscape	Site clearance Construction of public housing sites (3 no. Blocks, 50 no. Storeys), associate infrastructure works and engineered slope	Approximately 100% (0.3 ha out of 0.3 ha) of this LR will be affected.	Fair	Fair	permanent	permanent	Irreversible	Irreversible	Small	Small
LCA12.9	Ongoing Major Development Landscape	Nil	Nil	n/a	n/a	n/a	n/a	n/a	n/a	Negligible	Negligible

7 MITIGATION MEASURES

7.1.1 The previous sections have identified the potential landscape impacts due to the proposed potential housing development and associated infrastructure works. A series of mitigation measures have been formulated in order to alleviate some of the effects of these impacts where possible, while some mitigation measures are targeted to provide the potential landscape enhancement.

7.1.2 The proposed landscape mitigation measures for the site formation and associate infrastructure works for five housing sites in Tseung Kwan O are listed in **Table 7.1**. Generally, all mitigation measures are to be implemented as early as possible and many of these mitigation measures perform multiple functions. Further setback of site boundary for mitigation measures may affect the net site area and flat production which will be further investigated in design detail stage.

Table 7.1: Proposed Landscape Mitigation Measures for Five Housing Sites in Tseung Kwan O

Construction Stage	
CM01	Minimised works area and reinstatement of pedestrian access, footpath and hiking trails
CM02	Construction period reduced to practical minimum
CM03	Construction traffic reduced to practical minimum
CM04	Protection and preservation of the existing trees - trees / woodland within the site working area will be protected and preserved as far as possible in accordance with DEVB TCW No. 7/2015 and ETWB TCW No. 29/2004
CM05	Existing trees of good quality and condition that are unavoidably affected by the works shall be transplanted
CM06	Existing rare species of good quality and condition that are unavoidably affected by the works shall be transplanted to nearby undisturbed woodland patches or compensation woodland
CM07	Existing topsoil shall be re-used where possible for new planting areas within the project
CM08	Buffer zone of roughly 15m between watercourse for reservation of wooded riparian zone for preservation of unauthorized access and disturbance to the watercourse
CM09	Existing watercourses of good quality and condition that are unavoidably affected by the works shall be replaced and diverted to proposed trapezoidal green channel (refer to **Appendix C5** for visual illustration of Green Channels, details of green channel will be subject to detail design development)

Operation Stage	
OM01 ***	Landscape treatments on natural terrain hazard mitigation barriers to enhance the landscape amenity value of proposed man made slope
OM02*	Maximize soft landscape within site

Operation Stage	
OM03**	Implementation of greening measures e.g. roadside planting and provision of green coverage within the proposed development and associated infrastructure
OM04*	Sensitive design of streetscape, vertical greening, landscape treatment on slope and buffer zone shall be compatible with surrounding context
OM05	Reinstatement of disturbed areas during construction to match adjacent area or condition to suit future landuses
OM06	Compensatory tree planting shall be incorporated into the proposed housing site, engineering slope and associated infrastructure works where space is available
OM07	woodland compensation
OM08	Proper horticultural maintenance of greening, shrub planting and tree planting to facilitate the growth performance
OM09	A buffer zone of roughly 15m between watercourse for reservation of wooded riparian zone for preservation of unauthorized access and disturbance to the watercourse
OM10	Maintenance of green channel
OM11	Sensitive chromatic design of hard landscape with subdued earth colour finished to blend into existing vegetated landscape to suit future land uses as possible.
OM12	Post-transplant monitoring and establishment works shall be carried out to the transplanted rare floral species.

GREENING MEASURES within Housing Site	
GM01	Man-made slope treatment adopting native tree planting
GM02	Vertical greening (2.5m height max.)
GM03	Green roof at refuse collection point & covered walkway
GM04	Ornamental planting with diverse vegetation composition
GM05	Grass paver at car parking lots (except basement car park)
GM06	Transitional planting
GM07	Open space with chromatic design of hard landscape
GM08	Reprovision of pedestrian access, footpath & hiking trails
GM09	Planting for screening from traffic

Noted * **Conceptual Streetscape Design and Landscape Treatment on Slope refer to Appendix C1, C2, C3 and C4 accordingly, and refer to Appendix D for photos of proposed woodland planting area.**

** The greening ratio for all housing sites will comply with Site Coverage of Greenery for Government Building Projects (DEVB TCW No. 3/2012) and guiding principles on green coverage for public housing Development in

Hong Kong, Hong Kong Planning Standards and Guidelines particularly Chapter 4 (2015).

*** Typical landscape treatments on natural terrain hazard mitigation barriers refer to Appendix C3 accordingly.

7.1.3 The plans of proposed mitigation measures show the preliminary soft and hard landscape treatment to the five housing sites and associated infrastructure works (refer to **Figure 7.1.1 to 7.1.16**). Photomontages are demonstrated in **Figure 7.3.1 and Figure 7.3.3 to 7.3.7.**

7.1.4 The potential significance of landscape impacts during the construction and operation stages are tabulated in **Table 7.2 to 7.8**. All impacts are adverse unless otherwise stated. The proposed treatment in board brush tree survey within the study area is summarized and provided in **Table 7.10.** All impacts are adverse unless otherwise stated.

7.1.5 Preliminary compensatory tree planting area are identified and shown in **Figure 7.2.1 – 7.2.6**. and **Appendix D** which show the location of the proposed area potentially feasible to be used for woodland compensation. Compensation by way of planting native tree and shrub species in the nearby hillside terrestrial habitats is recommended in the Preliminary Environmental Study Report. The identified receptor site of compensatory planting should preferably be close to the Site and should also be suitable for planting whip tree and shrub seedlings. Discussion with AFCD was undertaken regarding the extent, location and the species list of the woodland compensation planting. The actual location(s) and size(s) of the woodland compensation areas in the vicinity of the Site will be further reviewed at the next stage. A list of native tree and shrub seedlings will be carefully proposed to suit the local site conditions, and the proposed plant list shall also base on the floristic composition of the secondary woodland to be impacted by the development. Post-planting monitoring of the woodland compensation area will be recommended (e.g. duration of the post-planting monitoring and monitoring methodology) at the next stage. The monitoring will be aimed to assess the success of the created woodland, monitor the growth performance of the planted seedlings, and identify any need of vegetation and site maintenance work.

7.1.6 Post-transplant establishment works shall be carried out to the transplanted rare floral species for an agreed period of time, so as to ensure their long term establishment at their recipient location. Periodic monitoring shall be carried out by a qualified ecologist/horticulturalist to record the plants' condition such as survival rate, growing condition and any signs of natural regeneration, and to decide whether any special maintenance operations or replacement planting is necessary.

7.1.7 *Not used*

7.1.8 Use of green channels for re-provision of the affected/diverted watercourses should be further studies at the next stage of the Project as far as practicable. The alignment of the proposed green channel is indicated in **Figure 7.1.11** and visual illustration of Green Channels are provided in Appendix C5. The details of green channel design will be formulated at the next stage of the Project.

7.1.9 *Not used*

7.1.10 *Not used*

Table 7.2: Significance Threshold of Residual Impact before and after Mitigation: Operation Day 1 and Year 10 at Site SKI-1 (Note: All impacts are Adverse unless otherwise noted as Beneficial).

ID. No.	Landscape Resources / Landscape Character Areas	Sensitivity (Low, Medium or High)	Magnitude of Change (Negligible, Small, Intermediate or Large)		Impact Significance Threshold BEFORE Mitigation (Insubstantial, Slight, Moderate or Substantial)		Recommended Mitigation Measures	Residual Impact Significance Threshold AFTER Mitigation (Insubstantial, Slight, Moderate or Substantial)		
			Construction	Operation	Construction	Operation		Construction	Operation Day 1	Operation Year10
LR1.1	**Woodland**	High	Large	Large	Substantial	Substantial	CM01-07 OM01-08, OM11 GM01-09	Substantial	Substantial	Moderate
LR1.2	**Shrubland / Grassland**	Medium	Negligible	Negligible	Insubstantial	Insubstantial	N/A	Insubstantial	Insubstantial	Insubstantial
LR1.3	**Plantation**	Medium	Large	Large	Substantial	Substantial	CM01-07 OM01-08, OM11 GM01-09	Moderate	Moderate	slight
LR1.4	**Shrubland**	Medium	Negligible	Negligible	Insubstantial	Insubstantial	N/A	Insubstantial	Insubstantial	Insubstantial
LR1.5	**Roadside Planting**	Medium	Negligible	Negligible	Insubstantial	Insubstantial	N/A	Insubstantial	Insubstantial	Insubstantial
LR1.6	**Open Space**	High	Negligible	Negligible	Insubstantial	Insubstantial	N/A	Insubstantial	Insubstantial	Insubstantial
LR1.7	**Semi-natural Watercourse**	High	Large	Large	Substantial	Substantial	CM08, CM09 OM09, OM10	Moderate	Moderate	slight
LR1.8	**Channelised Watercourse**	Medium	Small	Negligible	Slight	Insubstantial	CM08, CM09 OM09, OM10	Insubstantial	Insubstantial	Insubstantial
LR1.9	**Important Trees & Rare and Precious Species**	High	Large	Large	Substantial	Substantial	CM01-07 OM01-06 and 08	Substantial	Substantial	Moderate
LCA1.1	**Peaks, Upland and Hillside Landscape**	High	Large	Large	Substantial	Substantial	CM01-07 OM01-08, OM11 GM01-09	Substantial	Substantial	Substantial
LCA1.2	**Urban Recreational Landscape**	High	Negligible	Negligible	Insubstantial	Insubstantial	N/A	Insubstantial	Insubstantial	Insubstantial
LCA1.4	**Miscellaneous Rural Fringe Landscape**	Medium	Negligible	Negligible	Insubstantial	Insubstantial	N/A	Insubstantial	Insubstantial	Insubstantial
LCA1.5	**Miscellaneous Urban Fringe Landscape**	Medium	Small	Small	Moderate	Moderate	CM01-07 OM01-08, OM11 GM01-09	Slight	Slight	Insubstantial

ID. No.	Landscape Resources / Landscape Character Areas	Sensitivity (Low, Medium or High)	Magnitude of Change (Negligible, Small, Intermediate or Large)		Impact Significance Threshold BEFORE Mitigation (Insubstantial, Slight, Moderate or Substantial)		Recommended Mitigation Measures	Residual Impact Significance Threshold AFTER Mitigation (Insubstantial, Slight, Moderate or Substantial)		
			Construction	Operation	Construction	Operation		Construction	Operation	
									Day 1	Year10
LCA1.6	**Residential Urban Landscape**	Low	Negligible	Negligible	Insubstantial	Insubstantial	N/A	Insubstantial	Insubstantial	Insubstantial

Note:

[1] N/A - Not applicable

[2] The affected area of the LRs / LCAs within 500 m Assessment Area are indicated on **Figure - 5.1.1** and **Figure 5.3.1**. Photo views illustrating the affected area of the LRs / LCAs within 500 m Assessment Area are illustrated in **Figure 5.2.1** and **Figure 5.4.1**.

Table 7.3: Significance Threshold of Residual Impact before and after Mitigation: Operation Day 1 and Year 10 at Site SKI-2 (Note: All impacts are Adverse unless otherwise noted as Beneficial).

ID. No.	Landscape Resources / Landscape Character Areas	Sensitivity (Low, Medium or High)	Magnitude of Change (Negligible, Small, Intermediate or Large)		Impact Significance Threshold BEFORE Mitigation (Insubstantial, Slight, Moderate or Substantial)		Recommended Mitigation Measures	Residual Impact Significance Threshold AFTER Mitigation (Insubstantial, Slight, Moderate or Substantial)		
			Construction	Operation	Construction	Operation		Construction	Operation Day 1	Operation Year10
LR2.1	**Woodland**	High	Large	Large	Substantial	Substantial	CM01-07 OM01-08 GM01-09	Substantial	Substantial	Moderate
LR2.3	**Plantation**	Medium	Intermediate	Intermediate	Moderate	Moderate	CM01-07 OM01-08 GM01-09	Moderate	Moderate	slight
LR2.4	**Shrubland**	Medium	Negligible	Negligible	Insubstantial	Insubstantial	N/A	Insubstantial	Insubstantial	Insubstantial
LR2.5	**Roadside Planting**	Medium	Small	Small	Moderate	Moderate	CM01-07 OM01-08	Slight	Insubstantial	Insubstantial
LR2.6	**Open Space**									
LR2.6a	Open Space at Sheung Ning Playground	High	Negligible	Negligible	Insubstantial	Insubstantial	N/A	Insubstantial	Insubstantial	Insubstantial
LR2.6b	Open Space at Pui Shing Garden	High	Negligible	Negligible	Insubstantial	Insubstantial	N/A	Insubstantial	Insubstantial	Insubstantial
LR2.7	**Semi-natural Watercourse**	High	Large	Large	Substantial	Substantial	CM08 and 09 OM09 and 10	Substantial	Substantial	Moderate
LR2.9	**Important Trees & Rare and Precious Species**	High	Large	Large	Substantial	Substantial	CM01-07 OM01-06 and 08	Substantial	Substantial	Moderate
LR2.10	**Sea Waterbody and Coastline**	High	Negligible	Negligible	Insubstantial	Insubstantial	N/A	Insubstantial	Insubstantial	Insubstantial
LCA2.1	Peaks, Upland and Hillside Landscape	**High**	Large	Large	Substantial	Substantial	CM01-07 OM01-08 GM01-09	Substantial	Substantial	Substantial
LCA2.2	Urban Recreational Landscape	**High**	Negligible	Negligible	Insubstantial	Insubstantial	N/A	Insubstantial	Insubstantial	Insubstantial

ID. No.	Landscape Resources / Landscape Character Areas	Sensitivity (Low, Medium or High)	Magnitude of Change (Negligible, Small, Intermediate or Large)		Impact Significance Threshold BEFORE Mitigation (Insubstantial, Slight, Moderate or Substantial)		Recommended Mitigation Measures	Residual Impact Significance Threshold AFTER Mitigation (Insubstantial, Slight, Moderate or Substantial)		
			Construction	Operation	Construction	Operation		Construction	Operation	
									Day 1	Year10
LCA2.3	Unban Peripheral Village Landscape	**High**	Negligible	Negligible	Insubstantial	Insubstantial	N/A	Insubstantial	Insubstantial	Insubstantial
LCA2.5	Miscellaneous Urban Fringe Landscape	**Medium**	Intermediate	Small	Moderate	Moderate	CM01-07 OM01-08 GM01-09	Moderate	Slight	Slight
LCA2.6	Residential Urban Landscape	**Low**	Negligible	Negligible	Insubstantial	Insubstantial	N/A	Insubstantial	Insubstantial	Insubstantial
LCA2.7	Mixed Modern Comprehensive Urban Development Landscape	**Low**	Negligible	Negligible	Insubstantial	Insubstantial	N/A	Insubstantial	Insubstantial	Insubstantial

Note:

[1] N/A - Not applicable

[2] The affected area of the LRs / LCAs within 500 m Assessment Area are indicated on **Figure - 5.1.2** and **Figure 5.3.2**. Photo views illustrating the affected area of the LRs / LCAs within 500 m Assessment Area are illustrated in **Figure 5.2.2** and **Figure 5.4.2**.

Table 7.6: Significance Threshold of Residual Impact before and after Mitigation: Operation Day 1 and Year 10 at Site SKI-6 (Note: All impacts are Adverse unless otherwise noted as Beneficial).

ID. No.	Landscape Resources / Landscape Character Areas	Sensitivity (Low, Medium or High)	Magnitude of Change (Negligible, Small, Intermediate or Large)		Impact Significance Threshold BEFORE Mitigation (Insubstantial, Slight, Moderate or Substantial)		Recommended Mitigation Measures	Residual Impact Significance Threshold AFTER Mitigation (Insubstantial, Slight, Moderate or Substantial)		
			Construction	Operation	Construction	Operation		Construction	Operation	
									Day 1	Year10
LR6.1	Woodland	High	Negligible	Negligible	Insubstantial	Insubstantial	N/A	Insubstantial	Insubstantial	Insubstantial
LR6.2	Shrubland / Grassland	Medium	Negligible	Negligible	Insubstantial	Insubstantial	N/A	Insubstantial	Insubstantial	Insubstantial
LR6.3	Plantation	Medium	intermediate	intermediate	Moderate	Moderate	CM01-05, CM07 OM01-06, OM08, OM11 GM01-09	moderate	Slight	Insubstantial
LR6.5	Roadside Planting	Medium	Negligible	Negligible	Insubstantial	Insubstantial	N/A	Insubstantial	Insubstantial	Insubstantial
LR6.6a	Open Space at Pui Shing Garden	High	Negligible	Negligible	Insubstantial	Insubstantial	N/A	Insubstantial	Insubstantial	Insubstantial
LR6.6b	Open Space at Hang Hau Garden	High	Negligible	Negligible	Insubstantial	Insubstantial	N/A	Insubstantial	Insubstantial	Insubstantial
LR6.6c	Open Space at Hang Hau Man Kuk Lane Park	High	Negligible	Negligible	Insubstantial	Insubstantial	N/A	Insubstantial	Insubstantial	Insubstantial
LR6.6d	Open Space at Tseung Kwan O Sports Ground	High	Negligible	Negligible	Insubstantial	Insubstantial	N/A	Insubstantial	Insubstantial	Insubstantial
LR6.6e	Open Space at Hong Kong Velodrome Park	High	Negligible	Negligible	Insubstantial	Insubstantial	N/A	Insubstantial	Insubstantial	Insubstantial
LR6.9	Important Trees & Rare and Precious Species	High	Negligible	Negligible	Insubstantial	Insubstantial	N/A	Insubstantial	Insubstantial	Insubstantial
LR6.11	Grassland	Low	Large	Large	Moderate	Moderate	CM01-05, CM07 OM01-06, OM08, OM11 GM01-09	Slight	Slight	Insubstantial

ID. No.	Landscape Resources / Landscape Character Areas	Sensitivity (Low, Medium or High)	Magnitude of Change (Negligible, Small, Intermediate or Large)		Impact Significance Threshold BEFORE Mitigation (Insubstantial, Slight, Moderate or Substantial)		Recommended Mitigation Measures	Residual Impact Significance Threshold AFTER Mitigation (Insubstantial, Slight, Moderate or Substantial)		
			Construction	Operation	Construction	Operation		Construction	Operation	
									Day 1	Year10
LCA6.2	Urban Recreational Landscape	High	Negligible	Negligible	Insubstantial	Insubstantial	N/A	Insubstantial	Insubstantial	Insubstantial
LCA6.5	Miscellaneous Urban Fringe Landscape	Medium	Small	Small	Slight	Slight	CM01-05, CM07 OM01-06, OM08, OM11 GM01-09	Slight	Insubstantial	Insubstantial
LCA6.6	Residential Urban Landscape	Low	Negligible	Negligible	Insubstantial	Insubstantial	N/A	Insubstantial	Insubstantial	Insubstantial
LCA6.7	Mixed Modern Comprehensive Urban Development Landscape	Low	Negligible	Negligible	Insubstantial	Insubstantial	N/A	Insubstantial	Insubstantial	Insubstantial

Note:

[1] N/A - Not applicable

[2] The affected area of the LRs / LCAs within 500 m Assessment Area are indicated on **Figure - 5.1.5** and **Figure 5.3.5**. Photo views illustrating the affected area of the LRs / LCAs within 500 m Assessment Area are illustrated in **Figure 5.2.5** and **Figure 5.4.5**.

Table 7.7: Significance Threshold of Residual Impact before and after Mitigation: Operation Day 1 and Year 10 at Site SKI-11 (Note: All impacts are Adverse unless otherwise noted as Beneficial).

ID. No.	Landscape Resources / Landscape Character Areas	Sensitivity (Low, Medium or High)	Magnitude of Change (Negligible, Small, Intermediate or Large)		Impact Significance Threshold BEFORE Mitigation (Insubstantial, Slight, Moderate or Substantial)		Recommended Mitigation Measures	Residual Impact Significance Threshold AFTER Mitigation (Insubstantial, Slight, Moderate or Substantial)		
			Construction	Operation	Construction	Operation		Construction	Operation	
									Day 1	Year10
LR11.1	**Woodland**	**High**	Large	Large	Substantial	Substantial	CM01-07 OM01-08, OM11 GM01-09	Substantial	Substantial	Moderate
LR11.3	**Plantation**	**Medium**	Intermediate	Intermediate	Moderate	Moderate	CM01-07 OM01-08, OM11 GM01-09	Slight	Slight	Insubstantial
LR11.4	**Shrubland**	**Medium**	Negligible	Negligible	Insubstantial	Insubstantial	N/A	Insubstantial	Insubstantial	Insubstantial
LR11.5	**Roadside Planting**	**Medium**	Negligible	Negligible	Insubstantial	Insubstantial	N/A	Insubstantial	Insubstantial	Insubstantial
LR11.6	**Open Space**									
LR11.6a	Open Space at Yau Yue Wan	**High**	Negligible	Negligible	Insubstantial	Insubstantial	N/A	Insubstantial	Insubstantial	Insubstantial
LR11.6b	Open Space at Po Tsui Park	**High**	Negligible	Negligible	Insubstantial	Insubstantial	N/A	Insubstantial	Insubstantial	Insubstantial
LR11.7	**Semi-natural Watercourse**	**High**	Negligible	Negligible	Insubstantial	Insubstantial	N/A	Insubstantial	Insubstantial	Insubstantial
LR11.9	**Important Trees & Rare and Precious Species**	**High**	Large	Large	Substantial	Substantial	CM01-07 OM01-08, OM11 GM01-09	Substantial	Substantial	Moderate
LCA11.1	**Peaks, Upland and Hillside Landscape**	**High**	Large	Large	Substantial	Substantial	CM01-07 OM01-08, OM11 GM01-09	Substantial	Substantial	Substantial
LCA11.2	**Urban Recreational Landscape**	**High**	Negligible	Negligible	Insubstantial	Insubstantial	N/A	Insubstantial	Insubstantial	Insubstantial
LCA11.3	**Unban Peripheral Village Landscape**	**High**	Negligible	Negligible	Insubstantial	Insubstantial	N/A	Insubstantial	Insubstantial	Insubstantial

ID. No.	Landscape Resources / Landscape Character Areas	Sensitivity (Low, Medium or High)	Magnitude of Change (Negligible, Small, Intermediate or Large)		Impact Significance Threshold BEFORE Mitigation (Insubstantial, Slight, Moderate or Substantial)		Recommended Mitigation Measures	Residual Impact Significance Threshold AFTER Mitigation (Insubstantial, Slight, Moderate or Substantial)		
			Construction	Operation	Construction	Operation		Construction	Operation	
									Day 1	Year10
LCA11.5	**Miscellaneous Urban Fringe Landscape**	**Medium**	Intermediate	Small	Moderate	Moderate	CM01-07 OM01-08, OM11 GM01-09	Moderate	Slight	Insubstantial
LCA11.6	**Residential Urban Landscape**	**Low**	Negligible	Negligible	Insubstantial	Insubstantial	N/A	Insubstantial	Insubstantial	Insubstantial
LCA11.7	**Mixed Modern Comprehensive Urban Development Landscape**	**Low**	Negligible	Negligible	Insubstantial	Insubstantial	N/A	Insubstantial	Insubstantial	Insubstantial

Note:

[1] N/A - Not applicable

[2] The affected area of the LRs / LCAs within 500 m Assessment Area are indicated on **Figure - 5.1.6** and **Figure 5.3.6**. Photo views illustrating the affected area of the LRs / LCAs within 500 m Assessment Area are illustrated in **Figure 5.2.6** and **Figure 5.4.6**.

Table 7.8: Significance Threshold of Residual Impact before and after Mitigation: Operation Day 1 and Year 10 at Site SKI-12 (Note: All impacts are Adverse unless otherwise noted as Beneficial).

ID. No.	Landscape Resources / Landscape Character Areas	Sensitivity (Low, Medium or High)	Magnitude of Change (Negligible, Small, Intermediate or Large)		Impact Significance Threshold BEFORE Mitigation (Insubstantial, Slight, Moderate or Substantial)		Recommended Mitigation Measures	Residual Impact Significance Threshold AFTER Mitigation (Insubstantial, Slight, Moderate or Substantial)		
			Construction	Operation	Construction	Operation		Construction	Operation	
									Day 1	Year10
LR12.1	**Woodland**	**High**	Large	Large	Substantial	Substantial	CM01-07 OM01-08, OM11 GM01-09	Substantial	Substantial	Moderate
LR12.2	**Shrubland / Grassland**	**Medium**	Negligible	Negligible	Insubstantial	Insubstantial	N/A	Insubstantial	Insubstantial	Insubstantial
LR12.3	**Plantation**	**Medium**	Negligible	Negligible	Insubstantial	Insubstantial	N/A	Insubstantial	Insubstantial	Insubstantial
LR12.6	**Open Space**	**High**	Negligible	Negligible	Insubstantial	Insubstantial	N/A	Insubstantial	Insubstantial	Insubstantial
LR12.7	**Semi-natural Watercourse**	**High**	Negligible	Negligible	Insubstantial	Insubstantial	N/A	Insubstantial	Insubstantial	Insubstantial
LR12.8	**Channelised Watercourse**	**Medium**	Negligible	Negligible	Insubstantial	Insubstantial	N/A	Insubstantial	Insubstantial	Insubstantial
LR12.9	**Important Trees & Rare and Precious Species**	**High**	Large	Large	Substantial	Substantial	CM01-07 OM01-08, OM11 GM01-09	Substantial	Substantial	Moderate
LR12.11	**Grassland**	**Low**	Small	Small	Slight	Slight	CM01-07 OM01-08, OM11 GM01-09	Slight	Insubstantial	Insubstantial
LCA12.1	**Peaks, Upland and Hillside Landscape**	**High**	Large	Large	Substantial	Substantial	CM01-07 OM01-08, OM11 GM01-09	Substantial	Substantial	Substantial
LCA12.5	**Miscellaneous Urban Fringe Landscape**	**Medium**	Negligible	Negligible	Insubstantial	Insubstantial	N/A	Insubstantial	Insubstantial	Insubstantial
LCA12.7	**Mixed Modern Comprehensive Urban Development Landscape**	**Low**	Small	Small	Slight	Slight	CM01-07 OM01-08, OM11 GM01-09	Slight	Insubstantial	Insubstantial

ID. No.	Landscape Resources / Landscape Character Areas	Sensitivity (Low, Medium or High)	Magnitude of Change (Negligible, Small, Intermediate or Large)		Impact Significance Threshold BEFORE Mitigation (Insubstantial, Slight, Moderate or Substantial)		Recommended Mitigation Measures	Residual Impact Significance Threshold AFTER Mitigation (Insubstantial, Slight, Moderate or Substantial)		
			Construction	Operation	Construction	Operation		Construction	Operation	
									Day 1	Year10
LCA12.9	**Ongoing Major Development Landscape**	**Low**	Negligible	Negligible	Insubstantial	Insubstantial	N/A	Insubstantial	Insubstantial	Insubstantial

Note:

[1] N/A - Not applicable

[2] The affected area of the LRs / LCAs within 500 m Assessment Area are indicated on **Figure - 5.1.7** and **Figure 5.3.7**. Photo views illustrating the affected area of the LRs / LCAs within 500 m Assessment Area are illustrated in **Figure 5.2.7** and **Figure 5.4.7**.

Table 7.10: Summary of Proposed Treatment in Board Brush Tree Survey within Study Area

Site	LRs		Board Brush Tree Survey			
			Trees to be Retained (Approx. nos. of tree)	Trees to be Transplanted (Approx. nos. of tree)	Trees to be Felled (Approx. nos. of tree)	Total Trees Survey (Approx. nos. of tree)
SKI-1	LR1.1	Woodland	370	0	1390	1760
	LR1.3	Plantation	0	0	2830	2830
	LR1.5	Roadside Planting	6	1	7	14
	LR1.9	Important Trees & Rare And Precious Species	0	60	0	60
	TOTAL		**376 (8%)**	**61 (1%)**	**4227 (91%)**	**4664**
SKI-2	LR2.1	Woodland	0	0	1148	1148
	LR2.3	Plantation	260	0	519	779
	LR2.5	Roadside Planting	0	42	0	42
	LR2.9	Important Trees & Rare And Precious Species	0	13	0	13
	TOTAL		**260 (13%)**	**55 (3%)**	**1667 (84%)**	**1982**
SKI-6	LR6.3	Plantation	0	0	59	59
	LR6.9	Important Trees & Rare And Precious Species	1	0	0	1
	TOTAL		**1 (2%)**	**0**	**59 (98%)**	**60**
SKI-11	LR11.1	Woodland	150	0	2720	2870
	LR11.3	Plantation	20	10	640	670
	LR11.9	Important Trees & Rare And Precious Species	0	30	0	30
	TOTAL		**170 (5%)**	**40 (1%)**	**3360 (94%)**	**3570**
SKI-12	LR12.1	Woodland	5	0	5775	5780
	LR12.9	Important Trees & Rare And Precious Species	0	0	0	0
	TOTAL		**0**	**0**	**5775**	**5780**
TOTAL			**812 (5%)**	**156 (1%)**	**15088 (94%)**	**16056**
(APPROX.)			**810**	**160**	**15090**	**16060**

Note:
[1] The numbers of trees are approximate number only which quoted were based on the board bush tree survey in **Appendix A.** The above figure of numbers of trees are rounded to the nearest tens place.

8 PREDICTION OF SIGNIFICANCE OF LANDSCAPE IMPACTS

8.1 Potential Significance of the Landscape Impacts

8.1.1 The potential significance of the landscape impacts during the construction and operation stages, before and after mitigation, is provided in **Table 7.2 to 7.8**. This assessment follows the proposed methodology and assumes that the appropriate design measures incorporated in the development layout and the mitigation measures identified in **Table 7.1** would be implemented and that the full effect of the soft landscape mitigation measures would be realized after ten years. Cumulative impacts of five housing sites within 500 m Assessment Area on landscape resources and landscape character areas during construction stage and operation stage are described below.

8.2 Residual Landscape Impact in Construction Stage

8.2.1 Based on the broad brush tree group survey in **Appendix A**, it is estimated that approximately 15,250 nos. of trees are likely to be affected within five housing developments. Those are summarized in **Table 8.1 to 8.7**. Due to the proposed site formation and slope works of the housing development, it is unavoidably considered to remove the affected trees.

8.2.2 There is no registered Old and Valuable Tree (OVT) in the study area. No stonewall tree is observed in the tree group survey. Meanwhile, some existing trees are identified to fulfil the criteria of "Important Trees" as stipulated in ETWB TC(W) No. 29/2004 and DEVB TC(W) No. 7/2015., including one tree with trunk diameter > 1m in Site SKI-6 (to be retained) and rare and precious tree species in Sites SKI-1, SKI-2, SKI-11 and SKI-12.

8.2.3 Rare and precious tree species that are undersized (i.e. with DBH <95mm) are included to facilitate future assessment, but are not covered in the tree survey summary as listed in **Table 7.10**. Details of all floral species of conservation importance are recorded in Chapter 7.4 of the Preliminary Environmental Study Reports of each site. Affected tree and shrub species in each site that are protected under local ordinances (Cap 96 and Cap 586) are tabulated in **Table 8.0.1** to **Table 8.0.4** for reference.

8.2.4 Translocation of undersized trees belonging to a rare species is not covered by DEVB TC(W) 7/2015. Detail tree preservation and removal proposals to be prepared in detail design stage to further assess the undersized trees.

Table 8.0.1: SKI-1 Affected Tree and Shrub Species Protected Under Local Ordinances

Site	Species	Conservation Importance and Protection Status
Site SKI-1	*Aquilaria sinensis* (土沉香) trees and seedlings	*Aquilaria sinensis* is used medicinally as well as for ornamental purposes. Potential threats include destruction of habitats and over-exploitation, but the species is common in lowland areas in Hong Kong (AFCD 2008). This species is both listed as "Near Threatened" and under State protection (Category II) in China (AFCD 2003) and is classified as "Vulnerable" on the IUCN Red List of Threatened Species (IUCN 2015). The wild population of this species is protected under Cap. 586.
Site SKI-1	*Pyrenaria spectabilis* (石筆木) tree	*Pyrenaria spectabilis* is regarded as Restricted in Xing et al. (2000) and it is protected under Cap. 96A.
Site SKI-1	*Pavetta hongkongensis* (香港大沙葉) shrubs	*Pavetta hongkongensis* is commonly found in lowland forest, fung shui wood and thicket in Hong Kong (Xing et al. 2000; AFCD 2009). It is locally protected under Cap. 96A.

Table 8.0.2: SKI-2 Affected Tree and Shrub Species Protected Under Local Ordinances

Site	Species	Conservation Importance and Protection Status
Site SKI-2	*Aquilaria sinensis* (土沉香) trees and seedlings	*Aquilaria sinensis* is used medicinally as well as for ornamental purposes. Potential threats include destruction of habitats and over-exploitation, but the species is common in lowland areas in Hong Kong (AFCD 2008). This species is both listed as "Near Threatened" and under State protection (Category II) in China (AFCD 2003) and is classified as "Vulnerable" on the IUCN Red List of Threatened Species (IUCN 2015). The wild population of this species is protected under Cap. 586.
Site SKI-2	*Pavetta hongkongensis* (香港大沙葉) shrubs	*Pavetta hongkongensis* is commonly found in lowland forest, fung shui wood and thicket in Hong Kong (Xing et al. 2000; AFCD 2009). It is locally protected under Cap. 96A.

Table 8.0.3: SKI-11 Affected Tree and Shrub Species Protected Under Local Ordinances

Site	Species	Conservation Importance and Protection Status
Site SKI-11	*Aquilaria sinensis* (土沉香) trees and seedlings;	*Aquilaria sinensis* is used medicinally as well as for ornamental purposes. Potential threats include destruction of habitats and over-exploitation, but the species is common in lowland areas in Hong Kong (AFCD 2008). This species is both listed as "Near Threatened" and under State protection (Category II) in China (AFCD 2003) and is classified as "Vulnerable" on the IUCN Red List of Threatened Species (IUCN 2015). The wild population of this species is protected under Cap. 586.

Table 8.0.4: SKI-12 Affected Tree and Shrub Species Protected Under Local Ordinances

Site	Species	Conservation Importance and Protection Status
Site SKI-12	*Aquilaria sinensis* (土沉香)	*Aquilaria sinensis* is used medicinally as well as for ornamental purposes. Potential threats include destruction of habitats and over-exploitation, but the species is common in lowland areas in Hong Kong (AFCD 2008). This species is both listed as "Near Threatened" and under State protection (Category II) in China (AFCD 2003) and is classified as "Vulnerable" on the IUCN Red List of Threatened Species (IUCN 2015). The wild population of this species is protected under Cap. 586.
Site SKI-12	*Pavetta hongkongensis* (香港大沙葉) shrubs;	*Pavetta hongkongensis* is commonly found in lowland forest, fung shui wood and thicket in Hong Kong (Xing et al. 2000; AFCD 2009). It is locally protected under Cap. 96A.

8.2.5 Cumulative impact on existing trees (DBH ≥ 95mm) is summarized in **Table 8.1 to 8.7**.

Table 8.1: Cumulative Impact on Existing Trees in Site SKI-1

Id No.	Landscape Resources	Source of Impact		Residual Impact on Trees in Construction Stage
		Construction	Operation	
LR1.1	**Woodland**	**Direct Impact:** • Site clearance including removal of existing vegetation • Construction of public housing sites, associate infrastructure works and engineered slope (prior to establishment of planting)	• Housing site development and associated infrastructure works.	Approximately 1,390 nos. of trees will be affected which are proposed to be felled. Loss of trees will be compensated in the form of woodland within 500m. (see Fig. 7.2.1)
LR1.3	**Plantation**	**Direct Impact:** • Site clearance including removal of existing vegetation • Construction of public housing sites and engineered slope (prior to establishment of planting)	• Housing site development and associated infrastructure works.	Approximately 2,830 nos. of trees are proposed to be felled. Woodland planting will account for some of the plantation loss. (see Fig. 7.2.1)
LR1.9	**Important Trees & Rare and Precious Species**	**Direct Impact:** • Site clearance including removal of existing semi-natural watercourse • Construction of associated infrastructure works and green channel (prior to establishment of planting)	• Housing site development and associated infrastructure works.	Approximately 30 nos. of *Aquilaria sinensis* trees and 30 nos. of *Pyrenaria spectabilis* trees are proposed to be transplanted.

Note:

[1] The numbers of trees are approximate number only which quoted were based on the board bush tree survey in **Appendix A.** The above figure of numbers of trees are rounded to the nearest tens place.

[2] The affected area of the LRs / LCAs within 500 m Assessment Area are indicated on **Figure 5.1.1** and **Figure 5.3.1**. Photo views illustrating the affected area of the LRs / LCAs within 500 m Assessment Area are illustrated in **Figure 5.2.1** and **Figure 5.4.1**.

Table 8.2: Cumulative Impact on Existing Trees in Site SKI-2

Id No.	Landscape Resources	Source of Impact		Residual Impact on Trees in Construction Stage
		Construction	Operation	
LR2.1	**Woodland**	**Direct Impact:** • Site clearance including removal of existing vegetation • Construction of public housing sites, associate infrastructure works and engineered slope (prior to establishment of planting)	• Housing site development and associated infrastructure works.	Approximately 1,148 nos. of trees are proposed to be felled. (including 10 nos. of *Leucaena leucocephala* and remaining nos. are common trees) Loss of trees will be compensated in the form of woodland within 500m. (see Fig. 7.2.2)
LR2.3	**Plantation**	**Direct Impact:** • Site clearance including removal of existing vegetation • Construction of public housing sites, associate infrastructure works and engineered slope (prior to establishment of planting)	• Housing site development and associated infrastructure works.	Approximately 519 nos. of trees are proposed to be felled. (including 5 nos. of *Leucaena leucocephala* and remaining nos. are common trees) Woodland planting will account for some of the plantation loss. (see Fig. 7.2.2)
LR2.9	**Important Trees & Rare and Precious Species**	**Direct Impact:** • Site clearance including removal of existing vegetation	• Housing site development and associated infrastructure works.	Approximately 13 nos. of *Aquilaria sinensis* are proposed to be transplanted. Translocation of undersized trees belonging to a rare species is not covered by DEVB TC(W) 7/2015, but will be further studied in future stages.

Note:

[1] The numbers of trees are approximate number only which quoted were based on the board bush tree survey in **Appendix A.** The above figure of numbers of trees are rounded to the nearest tens place.

[2] The affected area of the LRs / LCAs within 500 m Assessment Area are indicated on **Figure 5.1.2** and **Figure 5.3.2**. Photo views illustrating the affected area of the LRs / LCAs within 500 m Assessment Area are illustrated in **Figure 5.2.2** and **Figure 5.4.2**.

Table 8.5: Cumulative Impact on Existing Trees in Site SKI-6

Id No.	Landscape Resources	Source of Impact		Residual Impact on Trees in Construction Stage
		Construction	Operation	
LR6.3	**Plantation**	**Direct Impact:** • Site clearance including removal of existing vegetation • Construction of public housing sites (prior to establishment of planting)	• Housing site development and associated infrastructure works.	Approximately 59 nos. of trees will be felled. (including 35 nos. of *Leucaena leucocephala* and remaining nos. are common trees)

Note:

[1] The numbers of trees are approximate number only which quoted were based on the board bush tree survey in **Appendix A.** The above figure of numbers of trees are rounded to the nearest tens place.

[2] The affected area of the LRs / LCAs within 500 m Assessment Area are indicated on **Figure 5.1.5** and **Figure 5.3.5**. Photo views illustrating the affected area of the LRs / LCAs within 500 m Assessment Area are illustrated in **Figure 5.2.5** and **Figure 5.4.5**.

Table 8.6: Cumulative Impact on Existing Trees in Site SKI-11

Id No.	Landscape Resources	Source of Impact		Residual Impact on Trees in Construction Stage
		Construction	Operation	
LR11.1	**Woodland**	**Direct Impact:** • Site clearance including removal of existing vegetation • Construction of public housing sites, associate infrastructure works and engineered slope (prior to establishment of planting)	• Housing site development and associated infrastructure works.	Approximately 2,720 nos. of trees are proposed to be felled. Loss of trees will be compensated in the form of woodland within 500m. (see Fig. 7.2.5).
LR11.3	**Plantation**	**Direct Impact:** • Site clearance including removal of existing vegetation • Construction of public housing sites, associate infrastructure works and engineered slope (prior to establishment of planting)	• Housing site development and associated infrastructure works.	Approximately 650 nos. of trees will be affected, of which approximately 10 nos. of trees to be transplanted and 640 nos. of trees to be felled. Woodland planting will account for some of the plantation loss. (see Fig. 7.2.5)
LR11.9	**Important Trees & Rare and Precious Species**	**Direct Impact:** • Site clearance including removal of existing vegetation	• Housing site development and associated infrastructure works.	Approximately 30 nos. of *Aquilaria sinensis* to be transplanted. All affected *Aquilaria sinensis* (calculated estimation of approx.. 30 nos. within this tree group) are tentatively proposed to be transplanted. Individual trees will be identified and assessed for Suitability for Transplanting in later stages. Translocation of undersized trees belonging to a rare species is not covered by DEVB TC(W) 7/2015, but tentatively proposed in this stage and will be further studied in future stages.

Note:

[1] The numbers of trees are approximate number only which quoted were based on the board bush tree survey in **Appendix A.** The above figure of numbers of trees are rounded to the nearest tens place.

[2] The affected area of the LRs / LCAs within 500 m Assessment Area are indicated on **Figure 5.1.6** and **Figure 5.3.6**. Photo views illustrating the affected area of the LRs / LCAs within 500 m Assessment Area are illustrated in **Figure 5.2.6** and **Figure 5.4.6**.

LRs / LCAs

Table 8.7: Cumulative Impact on Existing Trees in Site SKI-12

Id No.	Landscape Resources	Source of Impact		Residual Impact on Trees in Construction Stage
		Construction	Operation	
LR12.1	**Woodland**	**Direct Impact:** • Site clearance including removal of existing vegetation • Construction of public housing sites (prior to establishment of planting)	• Housing site development and associated infrastructure works.	Approximately 5,775 nos. of trees to be felled. Loss of trees will be compensated in the form of woodland within 500m. (see Fig. 7.2.6)
LR12.9	**Important Trees & Rare and Precious Species**	**Direct Impact:** • Site clearance including removal of existing vegetation	• Housing site development and associated infrastructure works.	Group of undersized rare tree / shrub species *Aquilaria sinensis, Ormosia pachycarpa, Diospyros vaccinioides* and *Pavetta hongkongensis* were recorded in the northern part of the site by ecological survey. All affected *Aquilaria sinensis, Ormosia pachycarpa, Diospyros vaccinioides* and *Pavetta hongkongensis* are tentatively proposed to be transplanted. Translocation of undersized trees and shrubs belonging to a rare species is not covered by DEVB TC(W) 7/2015, but will be further studied in future stages.

Note:

[1] The numbers of trees are approximate number only which quoted were based on the board bush tree survey in **Appendix A.** The above figure of numbers of trees are rounded to the nearest tens place.

[2] The affected area of the LRs / LCAs within 500 m Assessment Area are indicated on **Figure 5.1.7** and **Figure 5.3.7**. Photo views illustrating the affected area of the LRs / LCAs within 500 m Assessment Area are illustrated in **Figure 5.2.7** and **Figure 5.4.7**.

8.3 Residual Landscape Impact in Operation Stage

8.3.1 Residual impact on landscape resources and landscape character areas are shown in **Table 7.2 to 7.9.**

8.3.2 In compensation for the loss of vegetation and affected trees, new trees will be planted as compensatory planting. Detailed tree preservation, transplanting and felling including compensatory planting proposals shall be submitted to relevant government departments for approval in accordance with DEVB TCW No. 7/2015 in detail design stage. For the proposed trees to be felled, compensatory tree planting will be adopted within site boundary of the proposed works and potential identified woodland compensation area. Based on the HD's current scheme, it is anticipated that there are approximate 240 nos., 100 nos., 35 nos., 160 nos., and 190 nos. trees to be planted within the HD site in Site SKI-1, Site SKI-2, Site SKI-6, Site SKI-11, Site SKI-12 respectively.

8.3.3 Preliminary compensatory tree planting area are identified and shown in **Figure 7.2.1 – 7.2.6.** and **Appendix D** which show the location of the proposed area potentially feasible to be used for woodland compensation. Compensation by way of planting native tree and shrub species in the nearby hillside terrestrial habitats is recommended in the Preliminary Environmental Study Report. The identified receptor site of compensatory planting should preferably be close to the Site and should also be suitable for planting whip tree and shrub seedlings. Discussion with AFCD was undertaken regarding the extent, location and the species list of the woodland compensation planting.

Site SKI-1

8.3.4 LR1.1 Woodland – there is expected to be permanent and irreversible impact to the woodland (2.1ha) within the study area. Approximately 1,390 nos. of trees will be affected within the study area, in which 1,390 nos. are proposed to be felled. Loss of trees will be compensated in the form of woodland whip trees and individual trees planting for the Site SKI-1. It is anticipated that 1.9 ha of woodland compensation within 500m of the Site SKI-1 are proposed for compensation. Given the fact that Tseung Kwan O has been highly urbanised and the suitability of compensation site to be restricted by topography and ground constraints, the land availability for woodland compensation resulting from this Project is quite scarce.

8.3.5 **Figure 7.2.1** shows the location of the proposed area potentially feasible to be used for woodland compensation. With consideration of the topography and site constraints, as well as the land ownership and availability, woodland compensation resulting from the development of the Site could be compensated on hillside shrubland to the south of Che Kwu Shan with compensation size of about 1.9ha. The proposed compensation areas are ecologically linked to other terrestrial habitats, such as hillside shrubland and secondary woodland, in the vicinity. The shrubland to the south of Che Kwu Shan is a typical hillside terrestrial habitat vegetated with common herbs, shrubs and small trees. Selection of these areas could accelerate the natural successional process from the existing grassland/ shrubland and shrubland into more diverse woodland through seedling planting. In addition, the close proximity of the proposed woodland compensation areas to the Site can also create suitable woodland habitat for wildlife previously using the wooded areas within the Site. Enhancement or enrichment planting in these selected areas may involve certain level of vegetation clearance, including removal of herbs, climbers and dead woody vegetation, and/or selective thinning of dead and unhealthy shrub/ tree species, so as to open up more space for the planting works. *(refer to PER report no.067, section 7.7, for details).* These areas are located on slope with gradient $\leq$35 degrees to facilitate the planting works. The actual locations(s) and size(s) of the woodland compensation areas in the vicinity of the Project Site will be confirmed in the next stage. A list of native tree and shrub seedlings will be carefully proposed to suit the local site conditions, and the proposed plant list shall also

base on the floristic composition of the secondary woodland to be impacted by the development. According to the ecological assessment report (report no. REP-070), the ecological impacts arising from the development will be fully mitigated with the full implementation of the ecological mitigation measures, namely, woodland compensation, transplantation of the identified flora species of conservation important and implementation of good site practices during construction phased. Low or insignificant residual impacts are predicted after the implementation of these ecological mitigation measures *(refer to ecological assessment report, chapter 7, for details)*. In this regards, we would anticipated that this planting should be well established after 10 years, but it would take more than 10 years to reach the current maturity, habitat ecological value, and quality. The sensitivity of this resources is high. The mitigated impact significance is considered as substantial in Day 1 and moderate in year 10.

8.3.6 LR1.3 Plantation – permanent and irreversible impact is expected to the plantation area (LR 1.3). Approx. 2.1 ha. of plantation area is expected to be lost. The sensitivity of this LR is medium. Proposed woodland compensation will account for some of the loss. This LR is a man-made resources and is able to be recreated reasonably easily. This planting should be well established after 10 years. The mitigated impact significance is considered as moderate in Day 1 and slight in year 10.

8.3.7 Not used

8.3.8 LR1.9 Important Trees & Rare and Precious Species – There will be some impacts on rare and precious tree species due to the housing site development at Site SKI-1. It is anticipated that the site formation works will directly affect an estimated 60 nos. of trees and seedlings of the rare tree species *Aquilaria sinensis* and *Pyrenaria spectabilis*. The practicality of transplanting affected individuals depends on topography, size and condition of individual plants and will be studied and confirmed at the detailed design stage. "Transplantable" individuals may be transplanted to nearby undistributed woodland patches or within the compensation woodlands. As *Aquilaria sinensis* is commercially available and *Pyrenaria spectabilis* is commonly used in local woodland planting works, compensatory planting of both species is also practical. With adequate post-transplanting / post-planting monitoring and establishment works to ensure the rare trees are established in the long term, the residual landscape impact is expected to be moderate in year 10.

8.3.9 Based on the HD's current scheme, it is anticipated that there are approximate 240 nos. trees to be planted within the HD site.

8.3.10 LCA1.1 Peaks, upland and hillside landscape – the landscape character of the study area will be adversely altered by year 10. This will be primarily due to the future housing site development (4 nos. of residential blocks, each blocks is about 37-40 no. of storeys) and the associated infrastructure works in the downhill side of the Razor Hill. The natural landscape of Razor Hills and the ridgeline will experience changes to its character from the introduction of a large, elevated linear element into the natural hillside landscape. 4 nos. of public housing residential blocks (about 37-40 no storeys), infrastructural works, slope cuts, and access roads will adversely affect this natural landscape character area. Even with established planting within housing site and around the periphery, proposed works would significantly affect the natural hillside landscape character of SKI-1 located in the downhill side of Razor Hill. Residual impact significance is expected to be substantial in day 1 and in year 10.

Compatibility with the current environment / landscape setting: the proposed housing sites Site SKI-1 are located on the periphery of the TKO urban area. Proposed 4 nos. of residential blocks (about 37-40 no of storeys, +180mPD max.) will situate on the foothill of the Razor Hill, which is currently a natural hillsides landscape. Vast majority of the Razor Hill (+432mPD) is still undeveloped, comprising mountainous upland, which are generally plantation-covered, with some rocky outcrops. For the most part, the Razor Hill are

uninhabited and with some villages scattered in Tai Po Tsai, Tseung Kwan O Upper Village and Yau Yue Wan Village in the downhill side. As discussed in previous paragraph regarding the LCA 1.1, the Razor Hill are natural, tranquil and comprise areas of high landscape quality. It is anticipated that the significant engineering slope works involved for the housing site platforms (3.94ha). This will primarily be due to the removal of vegetation covered, associated made-man infrastructure works, and linear residential blocks into the landscape context. Even with implementation of mitigation measures as tabled in Table 7.1, it is anticipated that the proposed housing development could not be harmoniously compatible with the existing landscape context.

Site SK1-2

8.3.11 LR2.1 Woodland – there is expected to be permanent and irreversible impact to the woodland (1.7 ha) within the study area. Approximately 1,150 nos. of trees will be affected within the study area, in which 1,150 nos. are proposed to be felled. Loss of trees will be compensated in the form of woodland whip trees and individual trees planting for the Site SKI-2. It is anticipated that 1.96 ha of woodland compensation within 500m of the Site SKI-2 are proposed for compensation, and are presented in **Figure 7.2.2**.

8.3.12 Compensation by way of planting of native tree and shrub species in the nearby hillside habitat (such as shrubland) and in the understorey of plantation for enrichment planting is considered. The receptor site should preferably be close to the Site and should also be suitable for planting whip tree and shrub seedlings. Given the fact that Tseung Kwan O has been highly urbanised and the suitability of compensation site to be restricted by topography and ground constraints, the land availability for woodland compensation resulting from this Project is quite scarce. Appendix D shows the location of the proposed areas potentially feasible to be used for woodland compensation. With consideration of the topography and site constraints, as well as the land ownership and availability, woodland loss could be compensated on the hillside shrubland and plantation located to the south of Duckling Hill within the 500m Study Area, with compensation size of about 1.96ha. The close proximity of the proposed woodland compensation areas to the Site can benefit the use of these created or enriched woodlands by wildlife previously using the woodland within the Site. The actual location(s) and size(s) for woodland compensation for this Project will be confirmed at the next stage. A list of native tree and shrub seedlings will be carefully proposed to suit the local site conditions, and the proposed plant list shall also base on the floristic composition of the secondary woodland to be impacted by the development. (refer to PER report no. 068, section 7.7, for details). According to the ecological assessment report (refer to PER report no. 068, section 7.8, for details), the ecological impacts arising from the development will be fully mitigated with the full implementation of the proposed mitigation measures, namely, woodland compensation, transplantation of the identified floral species of conservation importance and implementation of good site practices during construction phase. Low or insignificant residual impacts are predicted after the implementation of these mitigation measures. In this regards, this planting should be well established after 10 years. The sensitivity of this resources is high. The mitigated impact significance is considered as substantial in Day 1 and moderate in year 10.

8.3.13 LR2.3 Plantation – permanent and irreversible impact is expected to the plantation area (LR 1.3). Approx. 1.7 ha of plantation area is expected to be lost. The sensitivity of this LR is medium. Proposed woodland compensation will account for some of the loss. The mitigated impact significance is considered as moderate in Day 1 and slight in year 10.

8.3.14 LR 2.5 Roadside plantation-there is expected to be slight impact on the interchange of Po Ning Road and Sheung Ning Road. It is anticipated that 42 nos. of roadside trees would be affected and is suggested to be transplanted. These roadside trees, *Melaleuca cajuputi subsp. Cumingiana*, are in fair amenity value, and fair tree form, with average height of approx. 10m. The mitigated impact significance is considered as insubstantial in Day 1 and insubstantial in year 10.

8.3.15 Not used

8.3.16 LR 2.9 Important Trees & Rare and Precious Species – There will be some impacts on rare and precious tree species due to the operation of Site SKI-2. Approximately 13 nos. of trees will be affected, in which affected trees are proposed to be transplanted. Species include 13 nos. *Aquilaria sinensis* trees. The practicality of transplanting affected individuals depends on topography, size and condition of individual plants and will be studied and confirmed at the detailed design stage. "Transplantable" individuals may be transplanted to nearby undistributed woodland patches or within the compensation woodlands. As *Aquilaria*

sinensis is commercially available, compensatory planting of species is also practical. With adequate post-transplanting / post-planting monitoring and establishment works to ensure the rare trees are established in the long term, the residual landscape impact is expected to be moderate in year 10.

8.3.17 Based on the HD's current scheme, it is anticipated that there are approximate 100 nos. trees to be planted within the HD site.

8.3.18 LCA2.1 Peaks, upland and hillside landscape – the landscape character of the study area will be moderately altered by year 10. This will be primarily due to the future housing site development (2 nos. of residential blocks, each blocks is about 40 no. of storeys) and the associated infrastructure works along the Ying Yip Road in the downhill side of the Ap Tsai Shan. The natural landscape of Ap Tsai Shan and the ridgeline will experience changes to its character from the introduction of a large, elevated linear element into the natural vegetated hillside landscape. 2 nos. of public housing residential blocks (about 40 no storeys), infrastructural works, slope cuts, and access roads along Ying Yip Road will adversely affect this natural landscape character area. Even with established planting in Year 10, the residential blocks will significantly affect this LCA in the Ap Tsai Shan area. Even with established planting within housing site and around the periphery, proposed works significantly affect the natural hillside landscape character of SKI-2 located in Ap Tsai Shan. Residual impact significance is expected to be substantial in day 1 and in year 10.

Compatibility with the current environment / landscape setting: the proposed housing sites Site SKI-2 are located on the periphery of the TKO urban area, in the vicinity of Ying Yip Road. Proposed 2 nos. of residential blocks (about 40 no of storeys, +170mPD max.) will situate on the eastern side foothill of the Ap Tsai Shan (Duckling Hill), which is currently a natural hillsides landscape. Uphill side of the Ap Tsai Shan is undeveloped, comprising mountainous uplands, which are generally plantation-covered, with some rocky outcrops. For the most part, the Ap Tsai Shan are uninhabited and with some villages scattered in the downhill site, namely, Yau Yue Wan Resite Village and Fragrant Villa. As discussed in previous paragraph regarding the LCA 2.1, the Ap Tsai Shan (+152 mPD) are natural, tranquil and comprise areas of high landscape quality. It is anticipated that significant slope works involved for the housing site platform (1.48ha), which will significantly downgrade the landscape character. This will primarily be due to the removal of vegetation covered, associated made-man infrastructure works, and linear residential blocks into the landscape context. Even with implementation of mitigation measures as tabled in Table 7.1, it is anticipated that the proposed housing development in Site SKI-2 could not be harmoniously compatible with the existing landscape context.

Site SK1-6

8.3.19 LR6.3 plantation – there is expected to be permanent and irreversible impact to the plantation within the study area. Approximately 60 nos. of trees will be affected within the study area, in which 60 nos. are proposed to be felled. Loss of trees will be compensated in the form of woodland whip trees and individual trees within HD site development in Site SKI-6. According to housing site's initial scheme, it is anticipated that 35 nos trees would be implemented in Site SKI-6. This planting should be well established after 10 years. The sensitivity of this resources is medium. The mitigated impact significance is considered as slight in Day 1 and insubstantial in year 10.

8.3.20 LR 6.9 Important Trees & Rare and Precious Species – There will be no impacts on rare and precious tree species due to the operation of Site SKI-6. 1 no. *Ficus microcarpa* meets criteria of Important Trees (DBH >1m & outstanding form) shall be retained. The amenity value, tree health and tree form are all considered as good. Residual landscape impact is expected to be insubstantial in year 10.

8.3.21 Based on the HD's current scheme, it is anticipated that there are approximate 35 nos. trees to be planted within the HD site.

Compatibility with the current environment / landscape setting: the proposed housing sites Site SKI-6 are located on the south of Chiu Shun Road. Proposed 1 no. of residential block (about 40 no. of storeys, +130mPD max.) will situate on the southern side Tin Ha Wan Village, which is a vacant land and developed area. Even with implementation of mitigation measures as tabled in Table 7.1, it is anticipated that the proposed single block housing development will be harmoniously compatible with the existing landscape context.

Site SK1-11

8.3.22 LR11.1 Woodland – there is expected to be permanent and irreversible impact to the woodland (2.2 ha) within the study area. Approximately 2,720 nos. of trees will be affected within the study area, in which 2,720 nos. are proposed to be felled. Loss of trees will be compensated in the form of woodland whip trees and individual trees planting for the Site SKI-11. It is anticipated that 2.43 ha of woodland compensation within 500m of the Site SKI-11 are proposed for compensation, and are presented in **Figure 7.2.5**.

8.3.23 With consideration of the topography and site constraints, as well as the land ownership and availability, woodland loss of 2.2ha resulting from the development of the Site could be compensated on the hillside shrubland to the southeast of Che Kwu Shan within the 500m Study Area, with compensation size of about 2.43ha. These areas are located on slope with gradient ≤ 35 degrees to facilitate the planting works. The proposed compensation areas are typical hillside shrubland vegetated with common herbs, shrubs and small trees, and ecologically linked to the shrubland and secondary woodland in the vicinity. Selection of this hillside habitat could accelerate the natural successional process from the existing shrubland into more diverse woodland through seedling planting. The close proximity of the proposed woodland compensation areas to the Site can also create suitable woodland habitat for wildlife previously using the wooded areas within the Site. The actual location(s) and size(s) for the woodland compensation areas in the vicinity of the Site will be confirmed at the next stage. A list of native tree and shrub seedlings will be carefully proposed to suit the local site conditions, and the proposed plant list shall also base on the floristic composition of the secondary woodland to be impacted by the development. (*refer to PER report no. 070, section 7.7, for details*). According to the ecological assessment report (*refer to PER report no. 070, section 7.8, for details*), the ecological impacts arising from the development will be fully mitigated with the full implementation of the proposed mitigation measures, including woodland compensation, transplantation of the identified flora species of conservation importance and implementation of good site practices during construction phase. Low or insignificant residual impacts are predicted after the implementation of these mitigation measures. This LR can be re-created in terms of quantity, but it would take more than 10 years to reach the present maturity, habitat quality and value. The sensitivity of this resources is high. The mitigated impact significance is considered as substantial in Day 1 and moderate in year 10.

8.3.24 LR11.9 (Important Trees & Rare and Precious Species) – approximately 30 nos. of *Aquilaria sinensis* are proposed to be transplanted. The amenity value, tree health and tree form are all considered as good. The practicality of transplanting affected individuals depends on topography, size and condition of individual plants and will be studied and confirmed at the detailed design stage. "Transplantable" individuals may be transplanted to nearby undistributed woodland patches or within the compensation woodlands. As *Aquilaria sinensis* is commercially available, compensatory planting of species is also practical. With adequate post-transplanting / post-planting monitoring and establishment works to ensure the rare trees are established in the long term, the residual landscape impact is expected to be moderate in year 10.

8.3.25 Based on the HD's current scheme, it is anticipated that there are approximate 160 nos. trees to be planted within the HD site.

8.3.26 LCA11.1 Peaks, upland and hillside landscape – the landscape character of the study area will be moderately altered by year 10. This will be primarily due to the future housing site development (4 nos. of residential blocks, each blocks is about 38-40 no. of storeys) and the associated slope cuts due to site formation works in SKI-11 site located in the downhill side of Razor Hill. The natural landscape of Razor Hill and the contours line will experience changes to its character from the introduction of a man-made large, elevated linear element into the natural vegetated hillside landscape. 4 nos. of man-made housing residential blocks

(about 38-40 no storeys), extensive slope cuts for the housing site platform will adversely affect this natural landscape character area. Even with established planting within housing site and around the periphery, proposed works significantly downgrade the natural hillside landscape character of SKI-11 located in the downhill side of Razor Hill. Residual impact significance is expected to be substantial in day 1 and in year 10.

Compatibility with the current environment / landscape setting: the proposed housing sites Site SKI-11 are located on the periphery of the TKO urban area. Proposed 4 nos. of residential blocks (about 38-40 no. of storeys, +140mPD max.) will situate on the foothill of the Razor Hill, which is currently a natural hillsides landscape. Vast majority of the Razor Hill (+432mPD) is still undeveloped, comprising mountainous upland, which are generally plantation-covered, with some rocky outcrops. For the most part, the Razor Hill are uninhabited and with some villages scattered in Yau Yue Wan Village, and Tseung Kwan O Upper Village in the downhill side. As discussed in previous paragraph regarding the LCA 11.1, the Razor Hill are natural, tranquil and comprise areas of high landscape quality. It is anticipated that huge slope work involved for the housing site platform (2.91ha), which will significantly downgrade the landscape character. This will primarily be due to the removal of vegetation covered, associated made-man infrastructure works, and linear residential blocks into the landscape context. Even with implementation of mitigation measures as tabled in Table 7.1, it is anticipated that the proposed housing development could not be harmoniously compatible with the existing landscape context.

Site SK1-12

8.3.27 LR12.1 Woodland – there is expected to be permanent and irreversible impact to the woodland (1.75 ha) within the study area. Approximately 5,780 nos. of trees will be affected within the study area, in which 5,775 nos. are proposed to be felled. Loss of trees will be compensated in the form of woodland whip trees and individual trees planting for the Site SKI-12. It is anticipated that 1.8 ha of woodland compensation within 500m of the Site SKI-12 are proposed for compensation, and are presented in **Figure 7.2.6**.

8.3.28 The receptor site should preferably be close to the Site and should also be suitable for planting whip tree and shrub seedlings. Appendix D shows the location of the proposed area potentially feasible to be used for woodland compensation. The close proximity of the proposed woodland compensation areas to the Site can benefit the use of these created or enriched woodlands by wildlife previously using the woodland within the Site. (*refer to PER report no. 071, section 8.7, for details*).Compensation by way of planting of native tree and shrub species in the nearby hillside grassland/shrubland habitat is recommended. Given the fact that Tseung Kwan O has been highly urbanized and the suitability of compensation site to be restricted by topography and ground constraints, the land availability for woodland compensation resulting from this Project is quite scarce. The actual location(s) and size(s) for woodland compensation for this Project will be confirmed in the later detail design stage. A list of native tree and shrub seedlings will be carefully proposed to suit the local site conditions, and the proposed plant list shall also bases on the floristic composition of the secondary woodland to be impacted by the development. According to the ecological assessment report (*refer to PER report no. 071, section 8.8, for details*) , the ecological impacts arising from the development will be fully mitigated with the full implementation of the proposed mitigation measures, including woodland compensation, transplantation of the identified flora species of conservation importance and implementation of good site practices during construction phase. Low or insignificant residual impacts are predicted after the implementation of these mitigation measures. This planting should be well established after 10 years, but it would take more than 10 years to reach the current maturity and value. The sensitivity of this resources is high. The mitigated impact significance is considered as substantial in Day 1 and moderate in year 10.

8.3.29 LR 12.9 Important Trees & Rare and Precious Species – There will be some large impacts to this LR due to the formation of housing site development. Group of undersized rare tree / shrub species *Aquilaria sinensis*, *Ormosia pachycarpa*, *Diospyros vaccinioides* and *Pavetta hongkongensis* were recorded in the northern part of the site by ecological survey. All affected *Aquilaria sinensis*, *Ormosia pachycarpa*, *Diospyros vaccinioides* and *Pavetta hongkongensis* are tentatively proposed to be transplanted to any future compensation woodland or preserved woodland patched within the proposed site in order to preserve the species population genetic characters as well as enhancing the naturalness and diversity in composition of floral community structure in the potential receptor sites. Translocation of undersized trees and shrubs belonging to a rare species is not covered by DEVB TC(W) 7/2015, but will be further detailed and studied in future stages. Residual landscape impact is expected to be moderate in year 10.

8.3.30 Based on the HD's current scheme, it is anticipated that there are approximate 190 nos. trees to be planted within the HD site.

8.3.31 LCA12.1 Peaks, Upland and Hillside Landscape – the landscape character of the study area will be adversely altered by year 10. This will be primarily due to the future housing site development (3 nos. of residential blocks, each blocks is about 50 no. of storeys) and the associated slope cuts due to site formation works in SKI-12 site located in the downhill side of Siu Chik Sha. The vegetated landscape character of foothill and the contours line will experience changes to its character from the introduction of a man-made large, elevated linear building blocks into the vegetated hillside landscape. 3 nos. of public housing

residential blocks (about 50 no. storeys), extensive slope cuts for the housing site platform will adversely affect this landscape character area. Even with established planting in Year 10, the residential development will significantly downgrade this LCA. Residual impact is expected to be substantial in year 10.

Compatibility with the current environment / landscape setting: the proposed housing sites Site SKI-12 are located on the periphery of the TKO urban area. Proposed 3 nos. of residential blocks (about 50 no. of storeys, +210mPD max.) will situate on the east of Hong Kong Movie City, Siu Chik Sha, which is on the western side of Ha Yeung Shan. Currently, the Ha Yeung Shan is a natural hillsides landscape. Vast majority of the Ha Yeung Shan and Siu Chik Shan are still undeveloped, comprising mountainous upland, which are generally plantation-covered. As discussed in previous paragraph regarding the LCA 12.1, the Siu Chik Sha and Ha Yeung Shan are natural, tranquil and comprise areas of high landscape quality. It is anticipated that the proposed housing development will significantly downgrade the landscape character. This will primarily be due to the removal of vegetation covered, and linear tall residential blocks (about 50 no. of storey) into the landscape context. Even with implementation of mitigation measures as tabled in Table 7.1, it is anticipated that the proposed housing development could not be harmoniously compatible with the existing landscape context.

Summary

8.3.32 There are a total of approximately 16,060 nos. trees within the proposed 5 housing sites. These include native woodland, plantation trees. Of these, 810 nos. trees are proposed to be retained, 160 nos. to be transplanted and 15,090 nos. are proposed to be felled. The total area of woodland lost is approximately 7.7ha, and areas of approximately 8.1 ha for compensatory planting have been identified, in which approx. 25,800 whip trees are proposed to be compensated. (refer to **Figure 7.2.1 to 7.2.6** for details). The landscape impacts on woodland arising from the proposed housing site developments would be fully mitigated with the full implementation of mitigation measures in terms of quantity. However, it would take more than 10 years to reach the current maturity and value. The actual extent of woodland compensation may vary by their latest site condition, topography, density of existing shrubs and trees established in these areas.

9 CONCLUSION

9.1.1 The development of 5 potential housing sites would involve approximately 17.0 ha of lands (including potential housing sites of 11.0 ha and associated infrastructural works of 6.0 ha). Based on the broad brush tree group survey undertaken, it is estimated that about 7.7 ha of secondly woodland with about 15,250 nos. of trees would be affected. Areas of 8.1 ha for compensatory planting have been preliminarily identified, in which approx. 25,800 whip trees are proposed to be compensated. Compensation by way of planting native tree and shrub species in the nearby hillside terrestrial habitats is recommended in the Preliminary Environmental Study Report. The proposed compensation areas should be ecologically linked to other terrestrial habitats, such as hillside shrubland and secondary woodland, in the vicinity. Further, the identified site of compensatory planting should preferably be close to the Site and should also be suitable for planting whip tree and shrub seedlings.

9.1.2 Approximately 15,250 nos. of trees will be affected by the 5 housing sites, in which 15,090 and 160 nos. of trees are proposed to be felled and transplanted respectively. Affected trees with high to medium amenity value and at least medium survival rate are proposed to be transplanted as far as practicable.

9.1.3 The broad brush tree group surveyed within the proposed site boundary are primarily common species. There is no registered Old and Valuable Tree (OVT) in the study area. No stonewall tree is observed in the tree group survey. Meanwhile, some existing trees are identified to fulfil the criteria of "Important Trees" as stipulated in ETWB TC(W) No. 29/2004 and DEVB TC(W) No. 7/2015. Rare and precious tree species that are undersized (i.e. with DBH <95mm) are also included to facilitate future assessment, namely:-

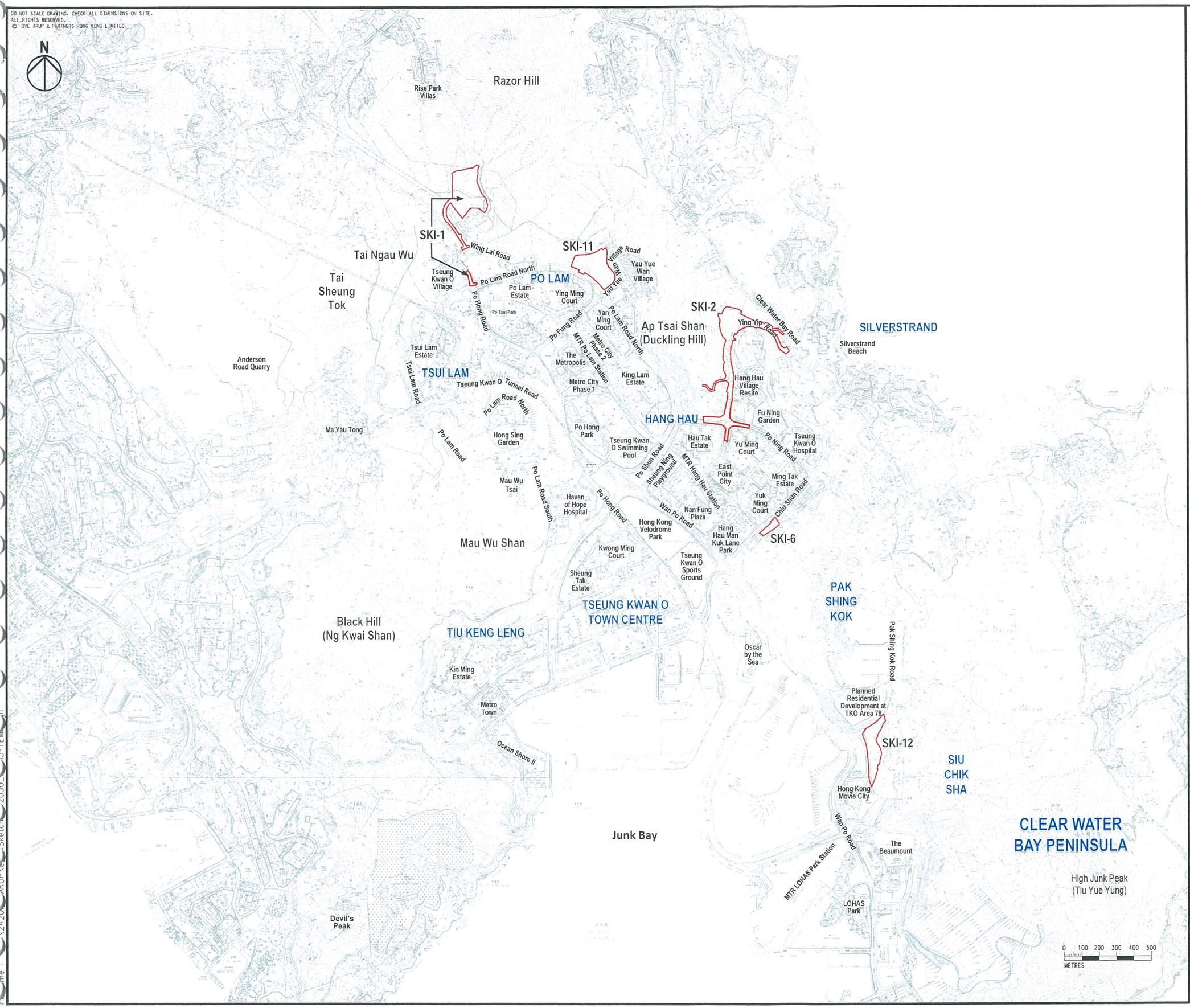
- Site SKI-1: Aquilaria sinensis (土沉香) trees and seedlings (The wild population of this species is protected under Cap. 586), Pyrenaria spectabilis (石筆木) tree (protected under Cap. 96A) and Pavetta hongkongensis (香港大沙葉) shrubs (locally protected under Cap. 96A);
- Site SKI-2: *Aquilaria sinensis* (土沉香) trees and seedlings (The wild population of this species is protected under Cap. 586), *Pavetta hongkongensis* (香港大沙葉) shrubs (locally protected under Cap. 96A);
- Site SKI-11: Aquilaria sinensis (土沉香) trees and seedlings (The wild population of this species is protected under Cap. 586);
- Site SKI-12: Aquilaria sinensis (土沉香) (The wild population of this species is protected under Cap. 586) and Pavetta hongkongensis (香港大沙葉) shrubs (locally protected under Cap. 96A);

9.1.4 Due to the development of the housing sites, vast majority of the existing trees and vegetation within these sites would be removed, and minor portion would be retained and transplanted. The Ficus microcarpa (榕樹) in Site SKI-6 which is considered as an Important tree is proposed to be retained.

9.1.5 Various mitigation measures are proposed for alleviating landscape impact. The housing sites should be developed with a greening ratio of 30% or a minimum 20% green coverage for cases with development constraint under special circumstances in accordance with guiding principles on green coverage for public housing development. Appropriate greening measures on slopes should be implemented. Sensitive streetscape design and appropriate roadside planting is recommended at five housing sites which provides subtle transition from the new housing development to the naturalistic landscape beyond, the overall impact of the housing development will be integrated in a long term after mitigation measures.

9.1.6 The detailed design of the housing sites should make reference to and comply with the Site Coverage of Greenery for Government Building Projects (DEVB TC(W) No. 3/2012), Guiding principles on green coverage for public housing Development, and Hong Kong Planning Standards and Guidelines, particularly Chapter 4 (2015).

9.1.7 Detailed Tree Preservation and Removal Proposals shall be submitted in accordance with ETWB TCW No.29/2004 and DEVB TCW No.7/2015 at the next stage. Overall, it is considered that the residual landscape impacts of the proposed five housing sites are considered acceptable with mitigation measures.



Legend

Study Area

Rev	Description	By	Date

Consultant

ARUP

Agreement No. NTE/10/2015
Landscape Assessment for Potential Housing Sites in the vicinity of Tseung Kwan O Feasibility Study

Drawing title

Proposed housing site location plan

Drawing no.			Rev.
FIGURE 1.1.1			
Drawn DK	Date 08/16	Checked KW	Approved EL
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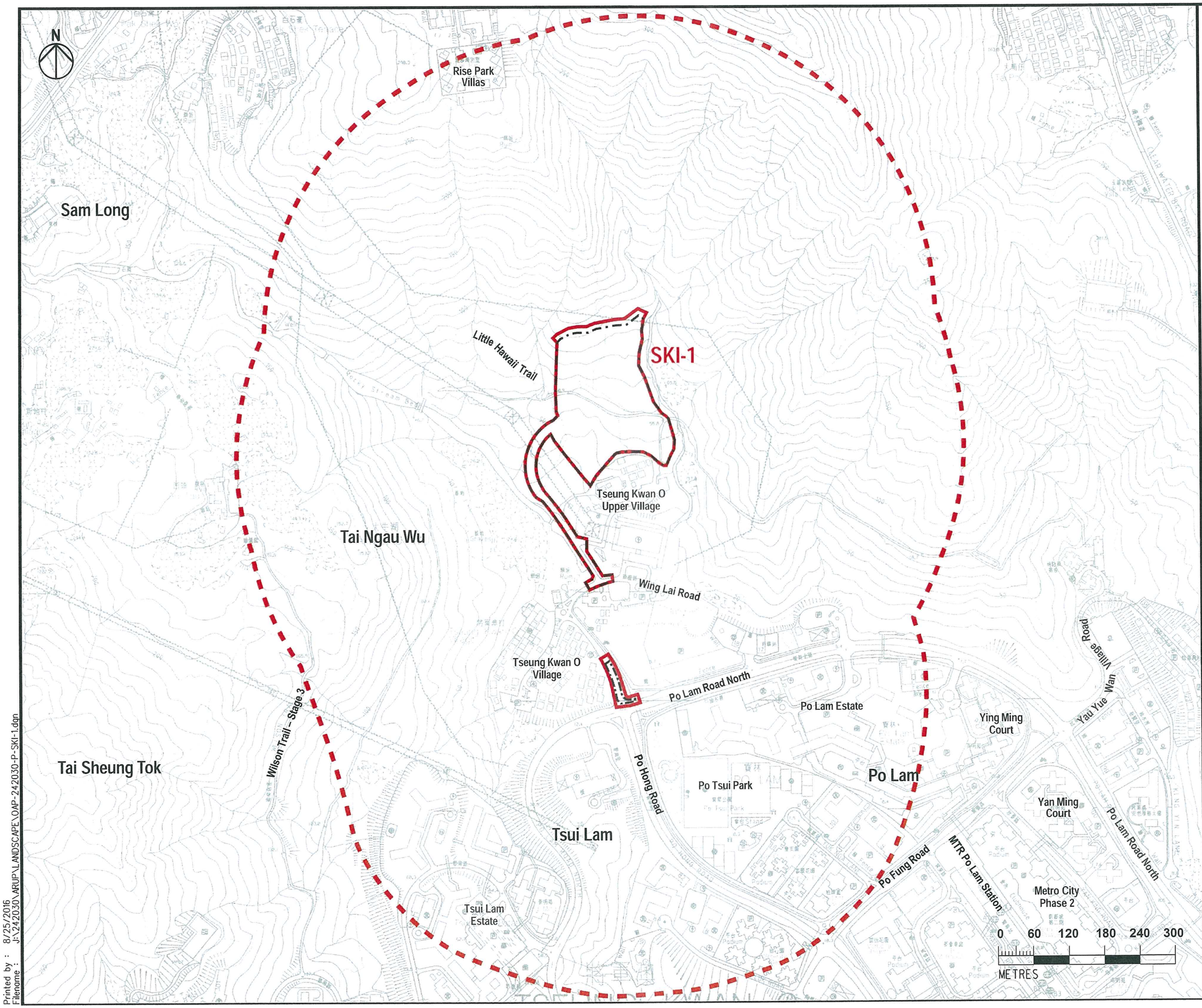

Legend

- 500m Assessment Area
- Study Area
- Affected Area

NOTE:
The Study Area only has no implication of housing site boundary. Actual housing site boundary is to be determined.

Rev	Description	By	Date
B	REVISED FINAL	EL	11/16
A	FINAL	EL	08/16
-	DRAFT	EL	04/16

Consultant

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Landscape Assessment for Potential Housing Sites in the vicinity of Tseung Kwan O Feasibility Study

Drawing title

Proposed housing site location plan – site SKI-1

Drawing no.			Rev.
FIGURE 1.2.1			B
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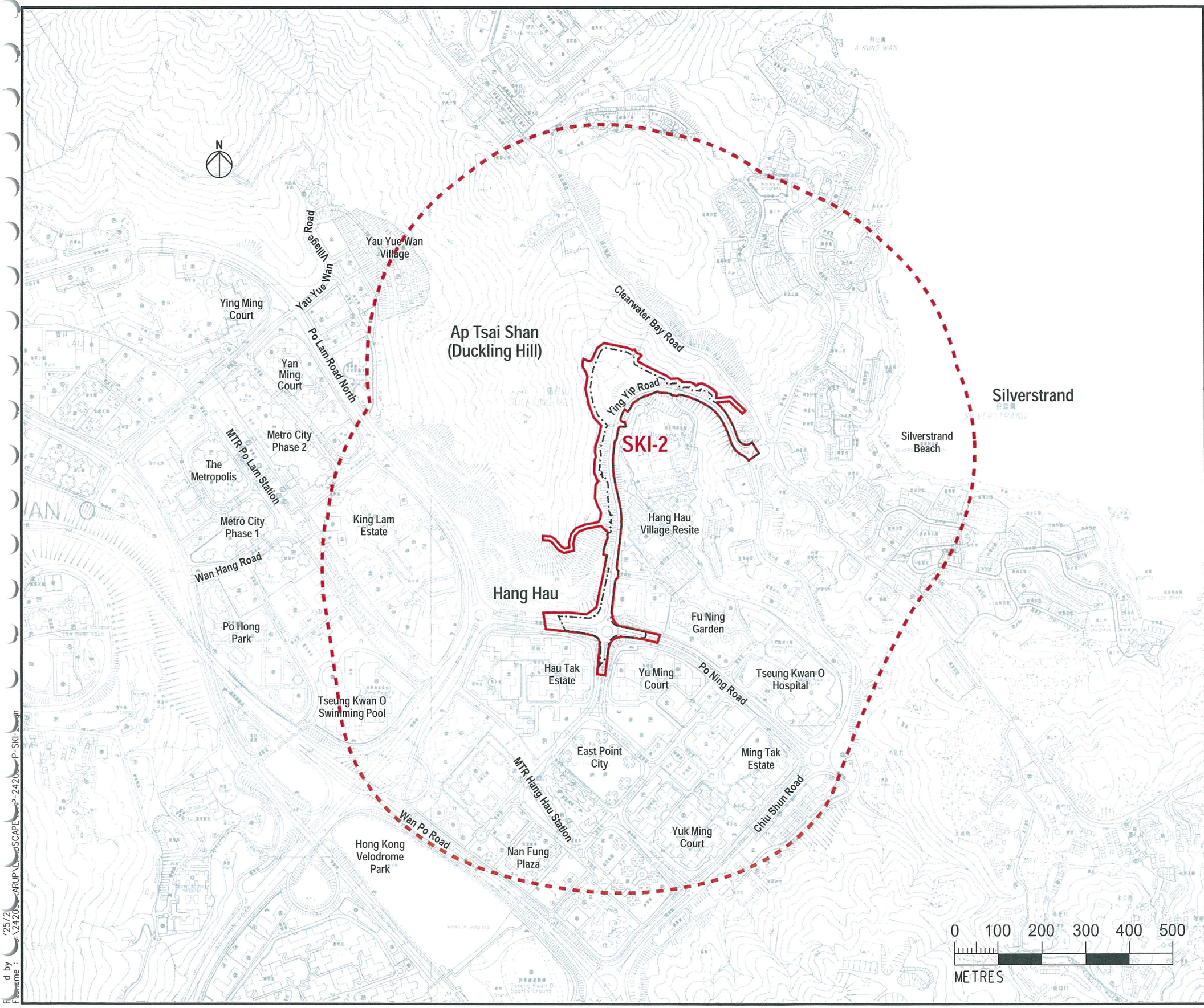

Legend

- 500m Assessment Area
- Study Area
- Affected Area

NOTE:
The Study Area only has no implication of housing site boundary. Actual housing site boundary is to be determined.

Rev	Description	By	Date
B	REVISED FINAL	EL	11/16
A	FINAL	EL	08/16
-	DRAFT	EL	04/16

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Landscape Assessment for Potential Housing Sites in the vicinity of Tseung Kwan O Feasibility Study

Drawing title

Proposed housing site location plan – site SKI-2

Drawing no.			Rev.
FIGURE 1.2.2			B
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N

Hang Hau

Fu Ning Garden

Hau Tak Estate

Yu Ming Court

Po Ning Road

Tseung Kwan O Swimming Pool

Tseung Kwan O Hospital

Sheung Ning Playground

East Point City

Ming Tak Estate

MTR Hang Hau Station

Chiu Shun Road

Wan Po Road

Yuk Ming Court

Tin Hau Temple

Hong Kong Velodrome Park

La Cite Noble

Fa Tau Chau

SKI-6

Hang Hau Man Kuk Lane Park

Po Hong Road

Tseung Kwan O Sports Ground

Pak Shing Kok

Beverly Garden

Tseung Kwan O Plaza

Wan Po Road

0 50 100 150 200 250

METRES

Legend

- 500m Assessment Area
- Study Area
- Affected Area

Rev	Description	By	Date

Consultant

ARUP

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Landscape Assessment for Potential Housing Sites in the vicinity of Tseung Kwan O Feasibility Study

Drawing title

Proposed housing site location plan – site SKI-6

Drawing no.			Rev.
FIGURE 1.2.5			
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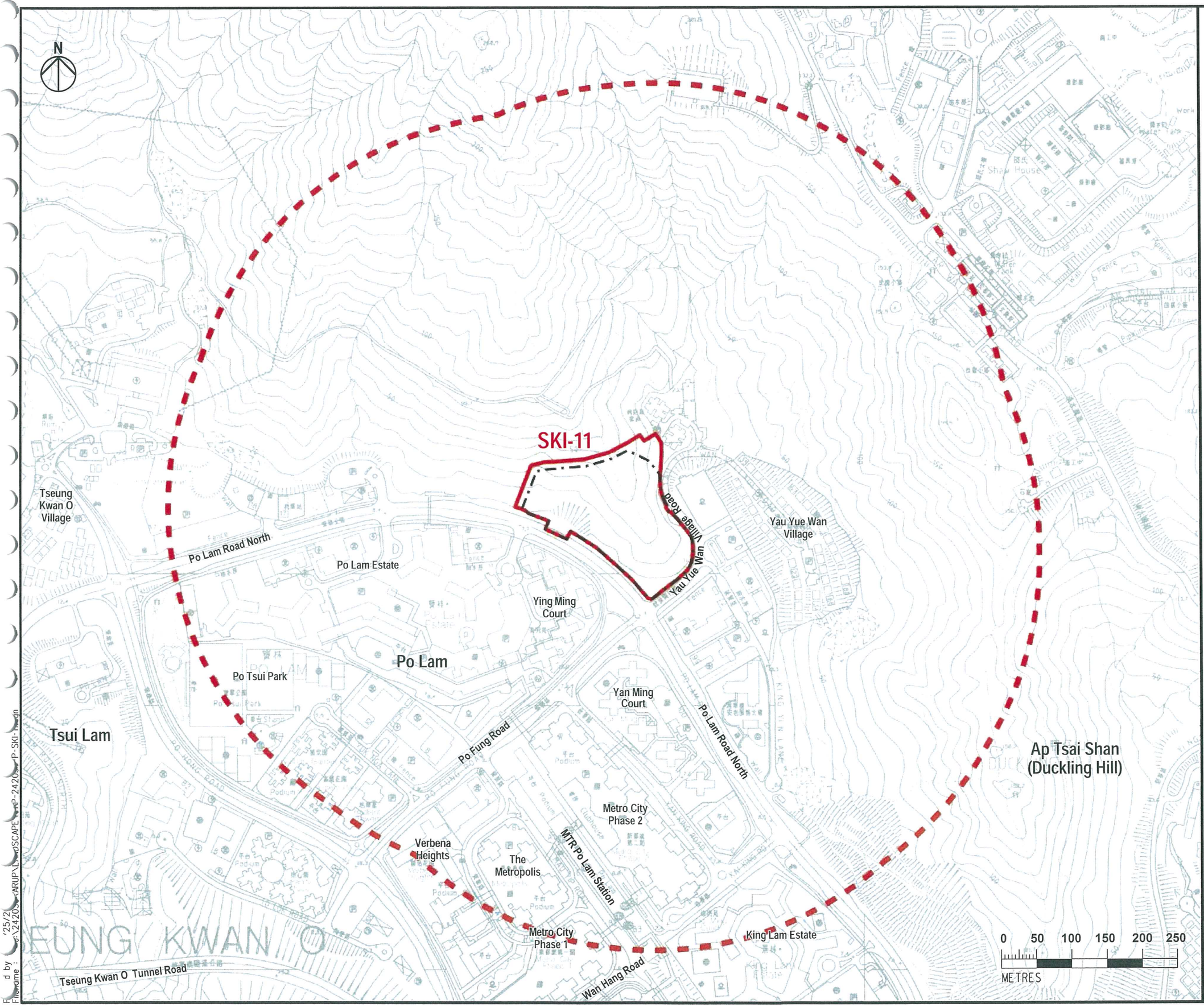

Legend

- 500m Assessment Area
- Study Area
- Affected Area

Rev	Description	By	Date

Consultant

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Agreement No. NTE/10/2015 Landscape Assessment for Potential Housing Sites in the vicinity of Tseung Kwan O Feasibility Study

Drawing title

Proposed housing site location plan – site SKI-11

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FIGURE 1.2.6			
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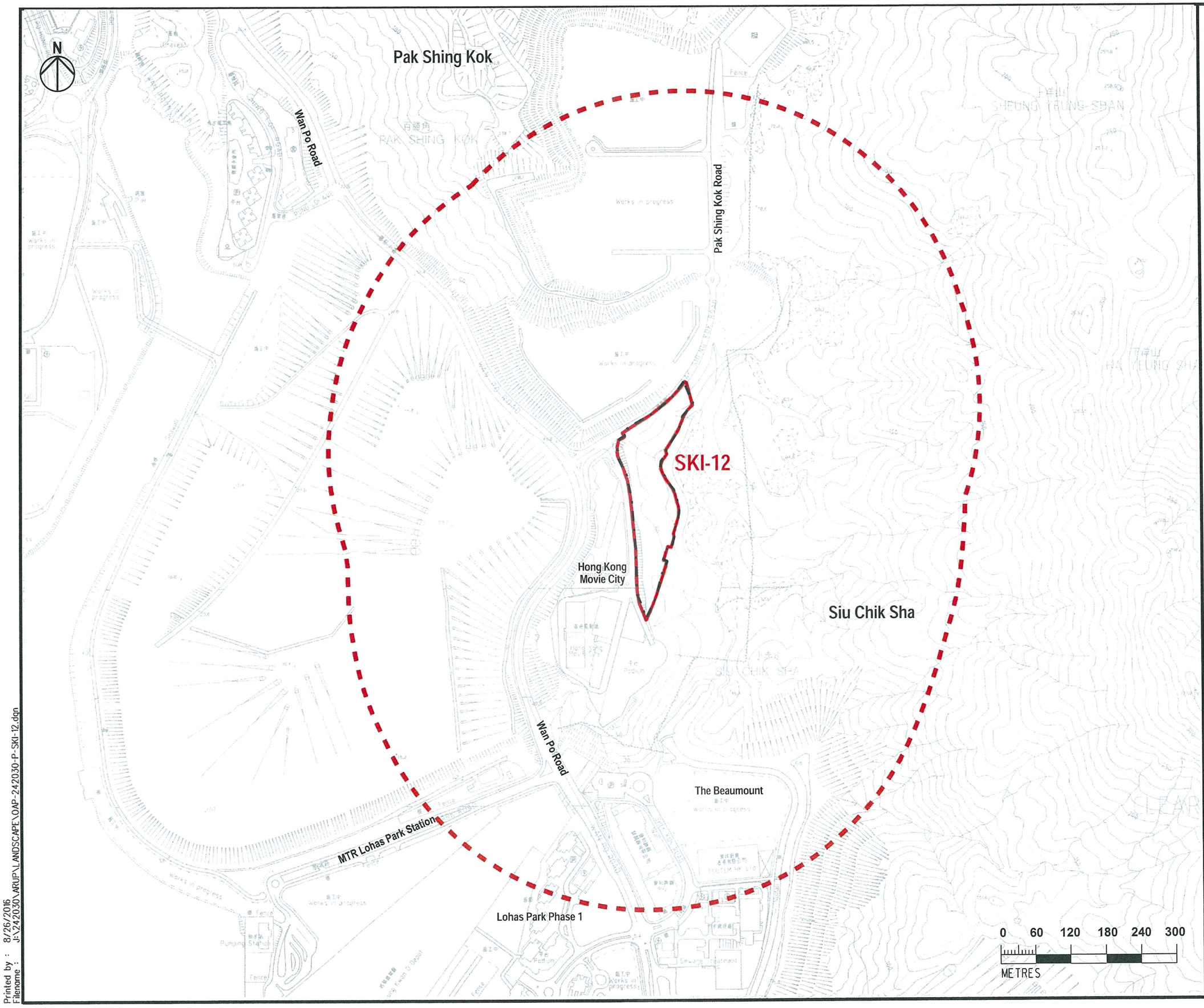

Legend

- 500m Assessment Area
- Study Area
- Affected Area

Rev	Description	By	Date

Consultant

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Agreement No. NTE/10/2015
Landscape Assessment for
Potential Housing Sites in the
vicinity of Tseung Kwan O
Feasibility Study

Drawing title

Proposed housing site
location plan – site SKI-12

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FIGURE 1.2.7			
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N

Rise Park Villas
Razor Hill
SKI-1
Tai Ngau Wu
Tai Sheung Tok
Wing Lai Road
Tseung Kwan O Village
Po Lam Road North
PO LAM
Po Lam Estate
Ying Ming Court
Po Tsui Park
Po Hong Road
Po Fung Road
Yau Yue Wan Village
Yau Yue Wan Village Road
SKI-11
Yang Ming Court
Po Lam Road North
SKI-2
Ap Tsai Shan (Duckling Hill)
Clear Water Bay Road
Ying Yip Road
SILVERSTRAND
Silverstrand Beach
Hang Hau Village Resite
Anderson Road Quarry
Tsui Lam Estate
Tsui Lam Road
TSUI LAM
Tseung Kwan O Tunnel Road
The Metropolis
MTR Po Lam Station
Metro City Phase 2
Metro City Phase 1
King Lam Estate
HANG HAU
Fu Ning Garden
Po Ning Road
Tseung Kwan O Hospital
Ma Yau Tong
Po Lam Road
Hong Sing Garden
Po Hong Park
Tseung Kwan O Swimming Pool
Po Shun Road
Sheung Ning Playground
MTR Hang Hau Station
Hau Tak Estate
Yu Ming Court
East Point City
Ming Tak Estate
Yuk Ming Court
Chiu Shun Road
Nan Fung Plaza
Wan Po Road
Hang Hau Man Kuk Lane Park
SKI-6
Mau Wu Tsai
Po Lam Road South
Haven of Hope Hospital
Po Hong Road
Hong Kong Velodrome Park
Mau Wu Shan
Kwong Ming Court
Sheung Tak Estate
Tseung Kwan O Sports Ground
TSEUNG KWAN O TOWN CENTRE
PAK SHING KOK
Black Hill (Ng Kwai Shan)
TIU KENG LENG
Kin Ming Estate
Metro Town
Ocean Shore II
Oscar by the Sea
Pak Shing Kok Road
Planned Residential Development at TKO Area 78
SKI-12
Siu Chik Sha
Hong Kong Movie City
Wan Po Road
The Beaumount
MTR LOHAS Park Station
LOHAS Park
CLEAR WATER BAY PENINSULA
Junk Bay
High Junk Peak (Tiu Yue Yung)
Devil's Peak

S/TKO/24 – Tseung Kwan O gazetted on 24 March 2017

0 100 200 300 400 500
METRES

Legend

Outline Zoning
Study Area

OZP Zoning

- CDA Comprehensive Development Area
- O Open Space
- R(E) Residential (Group E)
- REC Recreation
- V Village Type Development
- GB Green Belt
- R(D) Residential (Group D)
- R(A) Residential (Group A)
- C/R Commercial/Residential
- R(C) Residential (Group C)
- C Commercial
- G/IC Government, Institution or Community
- OU Other Specified Uses
- R(B) Residential (Group B)

Rev	Description	By	Date

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Agreement No. NTE/10/2015
Landscape Assessment for Potential Housing Sites in the vicinity of Tseung Kwan O Feasibility Study

Drawing title
Planning and development control framework

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FIGURE 4.1.1		-
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Legend

- 500m Assessment Area
- Study Area
- Affected Area
- Hiking Trail (Little Hawaii Trail)
- LR1.1 Woodland
- LR1.2 Shrubland / Grassland
- LR1.3 Plantation
- LR1.4 Shrubland
- LR1.5 Roadside Planting
- LR1.6 Open Space
- LR1.7 Semi-natural Watercourse
- LR1.8 Channelized Watercourse
- LR1.9 Important Trees & Rare And Precious Species
  - Area of *Aquilaria sinensis*
  - *Aquilaria sinensis*
  - *Cibotium barometz*
  - *Diospyros vaccinioides*
  - *Pavetta hongkongensis*
  - *Pyrenaria spectabilis*
  - *Rhododendron sp.*
  - *Camellia sinensis*
- Waterfall Location

NOTE:
The Study Area only has no implication of housing site boundary. Actual housing site boundary is to be determined.

Rev	Description	By	Date

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Agreement No. NTE/10/2015 Landscape Assessment for Potential Housing Sites in the vicinity of Tseung Kwan O Feasibility Study

Drawing title
Landscape resources plan – site SKI-1

Drawing no. FIGURE 5.1.1 Rev.

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DK	08/16	KW	EL

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N

Yau Yue Wan Village

Yau Yue Wan Village Road

Ap Tsai Shan (Duckling Hill)

Clearwater Bay Road

Ying Ming Court

Yan Ming Court

Po Lam Road North

Metro City Phase 2

MTR Po Lam Station

Metro City Phase 1

Wan Hang Road

King Lam Estate

SKI-2

Ying Yip Road

Silverstrand

Silverstrand Beach

Hang Hau Village Resite

Hang Hau

Fu Ning Garden

Po Hong Park

Hau Tak Estate

Yu Ming Court

Po Ning Road

Tseung Kwan O Hospital

Tseung Kwan O Swimming Pool

LR2.6a Sheung Ning Playground

MTR Hang Hau Station

East Point City

LR2.6b Pui Shing Garden

Ming Tak Estate

Chiu Shun Road

Wan Po Road

Hong Kong Velodrome Park

Nan Fung Plaza

Yuk Ming Court

0 100 200 300 400 500

METRES

Legend

- 500m Assessment Area
- Study Area
- Affected Area
- LR2.1 Woodland
- LR2.3 Plantation
- LR2.4 Shrubland
- LR2.5 Roadside Planting
- LR2.6 Open Space
- LR2.7 Semi-natural Watercourse
- LR2.9 Important Trees & Rare And Precious Species
  - *Area of Aquilaria sinensis*
  - *Area of Diospyros vaccinioides*
  - *Area of Keteleerio fortunei*
  - *Aquilaria sinensis*
  - *Diospyros vaccinioides*
  - *Pavetta hongkongensis*
- LR2.10 Sea Waterbody and Coastline

Rev	Description	By	Date

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Agreement No. NTE/10/2015
Landscape Assessment for Potential Housing Sites in the vicinity of Tseung Kwan O Feasibility Study

Drawing title

Landscape resources plan – site SKI-2

Drawing no.			Rev.
FIGURE 5.1.2			
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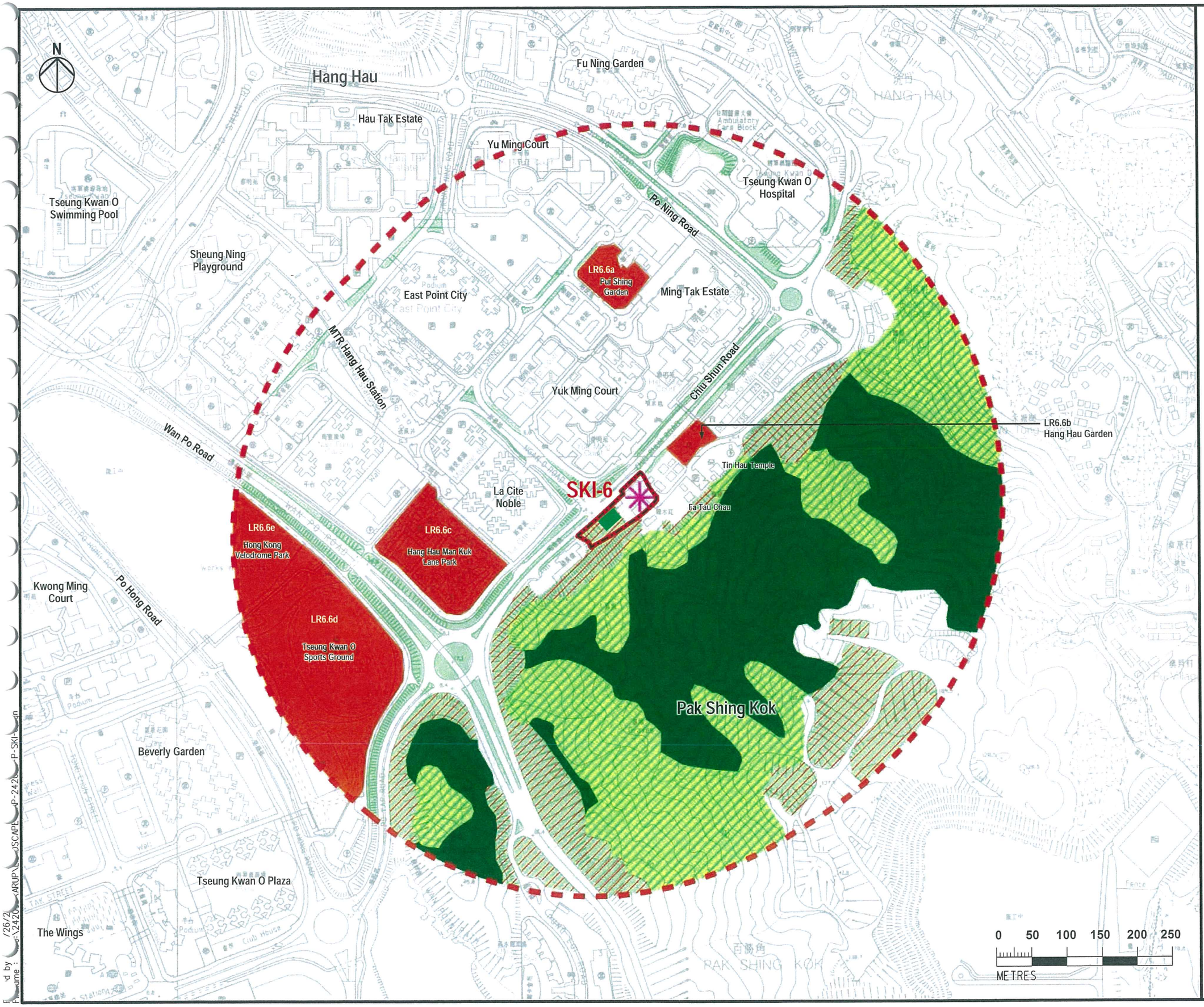

Legend

- 500m Assessment Area
- Study Area
- Affected Area
- LR6.1 Woodland
- LR6.2 Shrubland / Grassland
- LR6.3 Plantation
- LR6.5 Roadside Planting
- LR6.6 Open Space
- LR6.9 Important Trees & Rare And Precious Species
- *Important Tree - Large Tree with the Trunk Diameter ≥ 1m (IT-0601)*
- LR6.11 Grassland

Rev	Description	By	Date

Consultant

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Landscape Assessment for Potential Housing Sites in the vicinity of Tseung Kwan O Feasibility Study

Drawing title

Landscape resources plan – site SKI-6

Drawing no.			Rev.
FIGURE 5.1.5			-
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N

SKI-11

LR11.6a
Yau Yue Wan Playground

LR11.6b
Po Tsui Park

Tseung Kwan O Village

Po Lam Road North

Po Lam Estate

Ying Ming Court

Yau Yue Wan Village

Yau Yue Wan Village Road

Po Lam

Yan Ming Court

Po Lam Road North

Ap Tsai Shan (Duckling Hill)

Tsui Lam

Po Fung Road

Verbena Heights

The Metropolis

MTR Po Lam Station

Metro City Phase 2

Metro City Phase 1

King Lam Estate

SEUNG KWAN O

0 50 100 150 200 250
METRES

Legend

- 500m Assessment Area
- Study Area
- Affected Area
- LR11.1 Woodland
- LR11.3 Plantation
- LR11.4 Shrubland
- LR11.5 Roadside Planting
- LR11.6 Open Space
- LR11.7 Semi-natural Watercourse

LR11.9 Important Trees & Rare And Precious Species

- Area of *Aquilaria sinensis*
- Area of *Diospyros vaccinioides*
- *Aquilaria sinensis*
- *Rhododendron sp.*

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Landscape resources plan – site SKI-11

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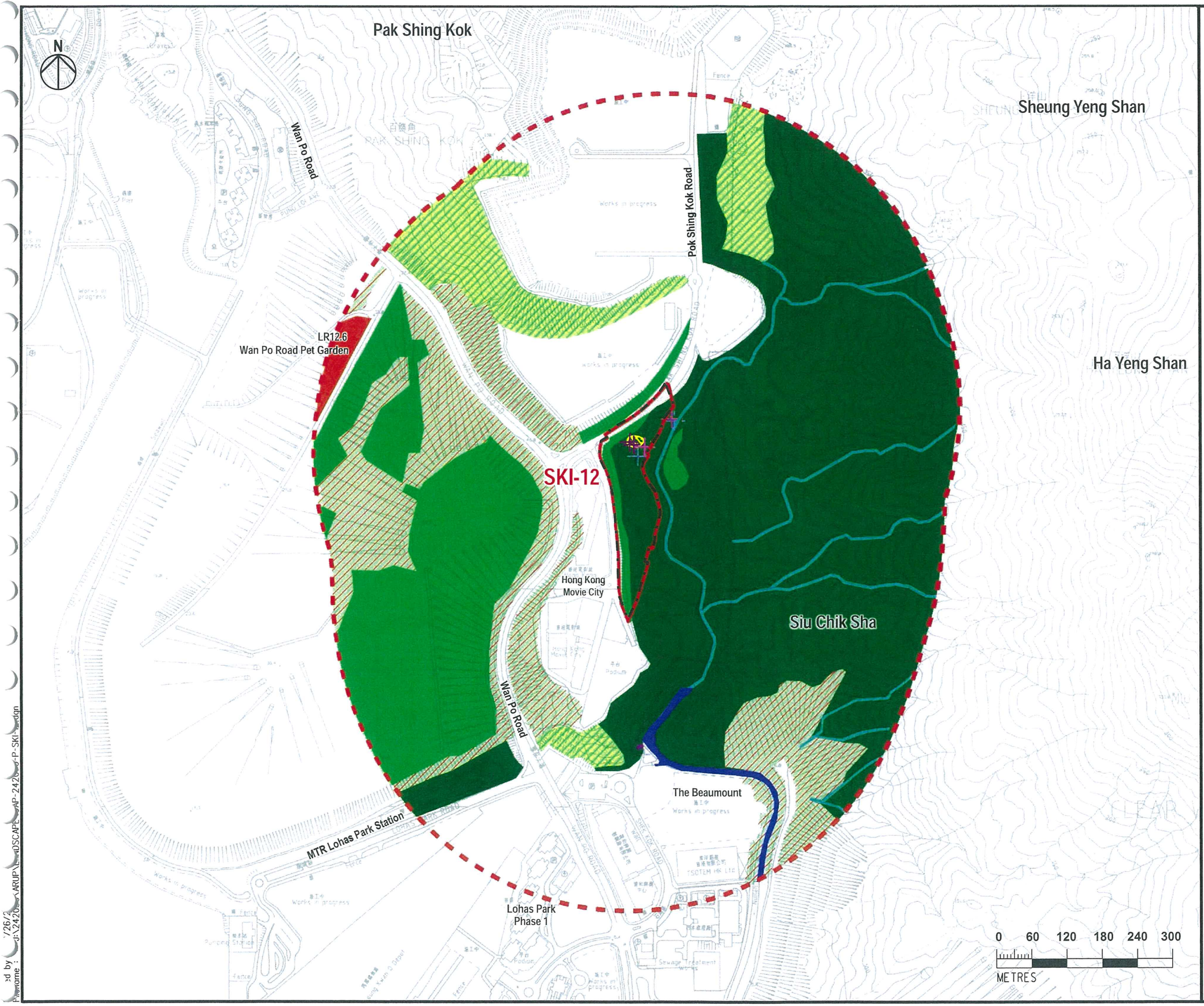

Legend

- 500m Assessment Area
- Study Area
- Affected Area
- LR12.1 Woodland
- LR12.2 Shrubland / Grassland
- LR12.3 Plantation
- LR12.6 Open Space
- LR12.7 Semi-natural Watercourse
- LR12.8 Channelized Watercourse
- LR12.9 Important Trees & Rare And Precious Species
  - *Area of Diospyros vaccinioides*
  - *Area of Ormosia pachycarpa*
  - *Aquilaria sinensis*
  - *Diospyros vaccinioides*
  - *Pavetta hongkongensis*
- LR12.11 Grassland

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Landscape resources plan – site SKI-12

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FIGURE 5.1.7			-
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LR1.1 Woodland on Razor Hill near to Site SKI-1



LR1.1 Woodland on Razor Hill at Site SKI-1



LR1.1 Woodland on Razor Hill at Site SKI-1



LR1.2 Shrubland / Grassland on Tai Ngau Wu near to Site SKI-1



LR1.3 Plantation on Razor Hill at Site SKI-1



LR1.4 Shrubland on Razor Hill near to Site SKI-1

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Landscape resources photos – site SKI-1
(sheet 1 of 4)

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LR1.5 Roadside Planting along Po Lam Road North near to Site SKI-1



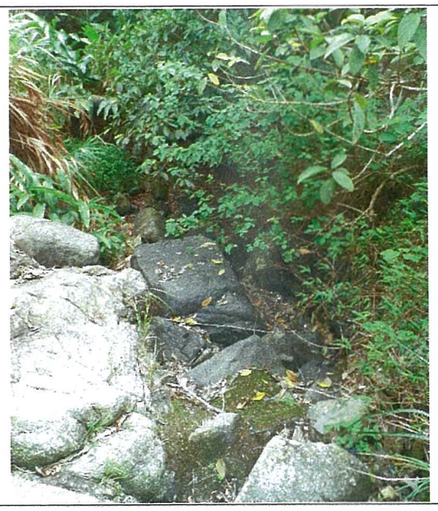
LR1.5 Roadside Planting along Wing Lai Road near to Site SKI-1



LR1.6 Open Space at Po Tsui Park near to SiteSKI-1



LR1.7 Semi-natural Watercourse on Razor Hill near to Wing Lai Road and Site SKI-1



LR1.7 Semi-natural Watercourse at Site SKI-1



LR1.8 Channelised Watercourse near to Site SKI-1

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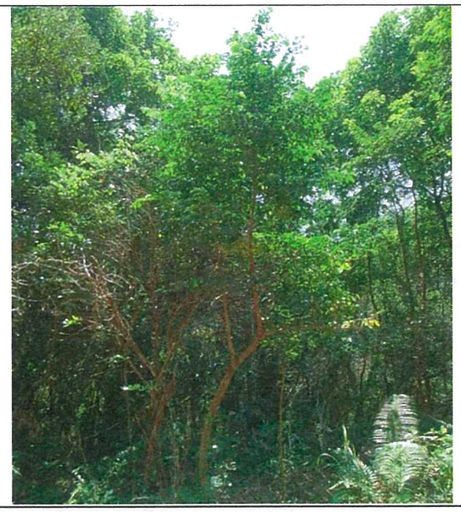
LR1.9 Important Trees & Rare and Precious Species on Razor Hill at Site SKI-1
- *Aquilaria sinensis* (1 of 4)



LR1.9 Important Trees & Rare and Precious Species on Razor Hill at Site SKI-1
- *Aquilaria sinensis* (2 of 4)



LR1.9 Important Trees & Rare and Precious Species on Razor Hill at Site SKI-1
- *Aquilaria sinensis* (3 of 4)



LR1.9 Important Trees & Rare and Precious Species on Razor Hill at Site SKI-1
- *Aquilaria sinensis* (4 of 4)



LR1.9 Important Trees & Rare and Precious Species on Razor Hill at Site SKI-1
- *Cibotium barometz*



LR1.9 Important Trees & Rare and Precious Species on Tai Ngau Wu near to Site SKI-1
- *Diospryos vaccinioides*

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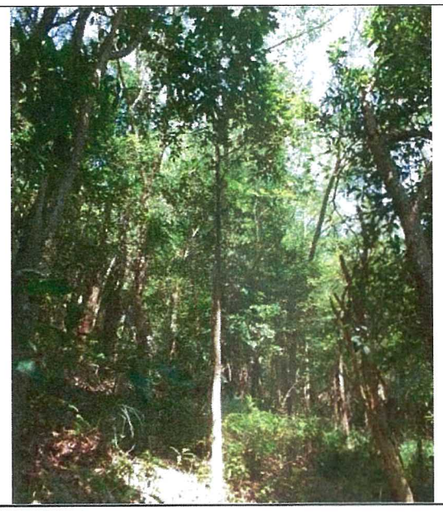
LR1.9 Important Trees & Rare and Precious Species on Razor Hill at Site SKI-1
- Pavetta hongkongensis



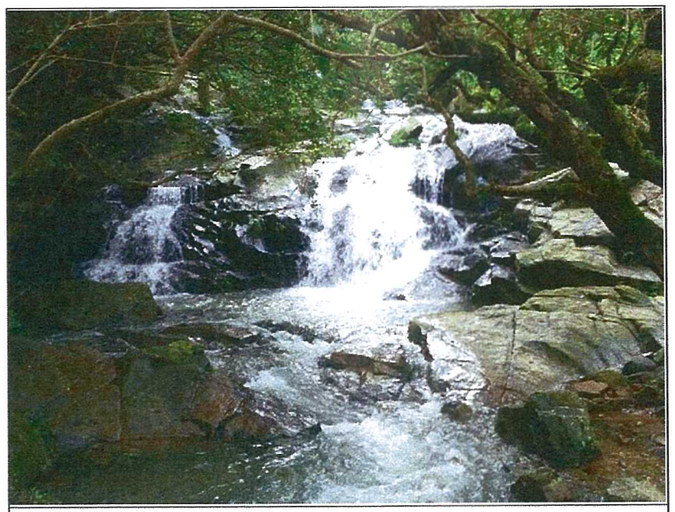
LR1.9 Important Trees & Rare and Precious Species on Razor Hill at Site SKI-1
- Pyrenaria spectabilis



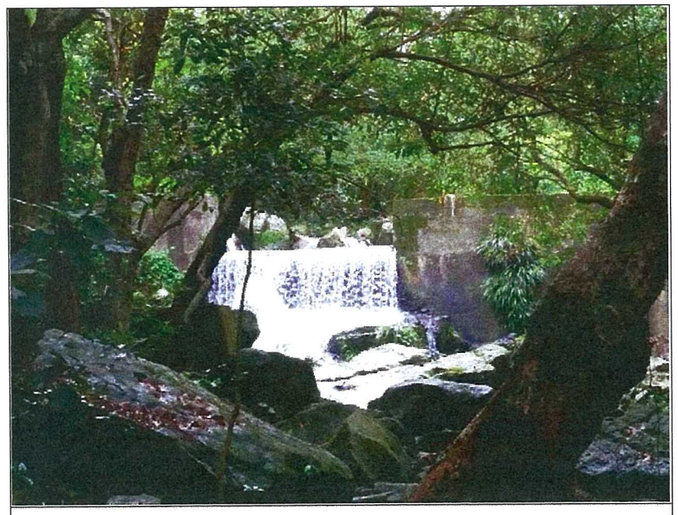
LR1.9 Important Trees & Rare and Precious Species on Razor Hill near to Site SKI-1
- Rhododendron sp.



Little Hawaii Trail near to Site SKI-1



Waterfall at about 200m to SKI-1



Waterfall at about 400m to SKI-1

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Landscape resources photos – site SKI-1
(sheet 4 of 4)

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LR2.1 Woodland on Ap Tsai Shan at Site SKI-2



LR2.1 Woodland on Ap Tsai Shan at Site SKI-2



LR2.3 Plantation on Ap Tsai Shan at Site SKI-2



LR2.3 Plantation on Ap Tsai Shan along Ying Yip Road at Site SKI-2



LR2.3 Plantation at Site SKI-2



LR2.4 Shrubland on Ap Tsai Shan near to Site SKI-2

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Landscape resources photos – site SKI-2
(sheet 1 of 3)

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LR2.5 Roadside Planting along Po Ning Road near to Site SKI-2



LR2.5 Roadside Planting along Sheung Ning Road, Po Ning Road and Ying Yip Road at Site SKI-2



LR2.6a Open Space at Sheung Ning Playground near to Site SKI-2



LR2.6b Open Space at Pui Shing Garden near to Site SKI-2



LR2.7 Semi-natural Watercourse on Ap Tsai Shan at Site SKI-2

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Landscape resources photos – site SKI-2
(sheet 2 of 3)

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LR2.9 Important Trees & Rare and Precious Species on Ap Tsai Shan at Site SKI-2
- Keteleeria fortunei



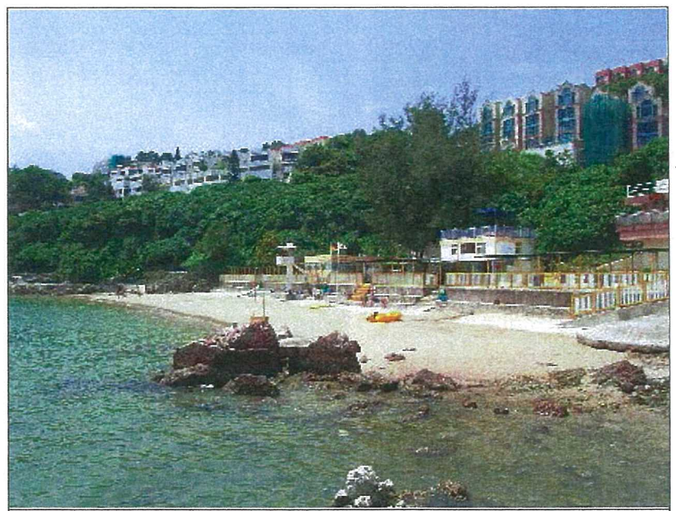
LR2.9 Important Trees & Rare and Precious Species on Ap Tsai Shan at Site SKI-2
- Pavetta hongkongensis



LR2.9 Important Trees & Rare and Precious Species on Ap Tsai Shan at Site SKI-2
- Aquilaria sinensis



LR2.9 Important Trees & Rare and Precious Species on Ap Tsai Shan at Site SKI-2
- Diospyros vaccinioides



LR2.10 Sea Waterbody and Coastline at Silverstrand near to Site SKI-2

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Landscape resources photos – site SKI-2
(sheet 3 of 3)

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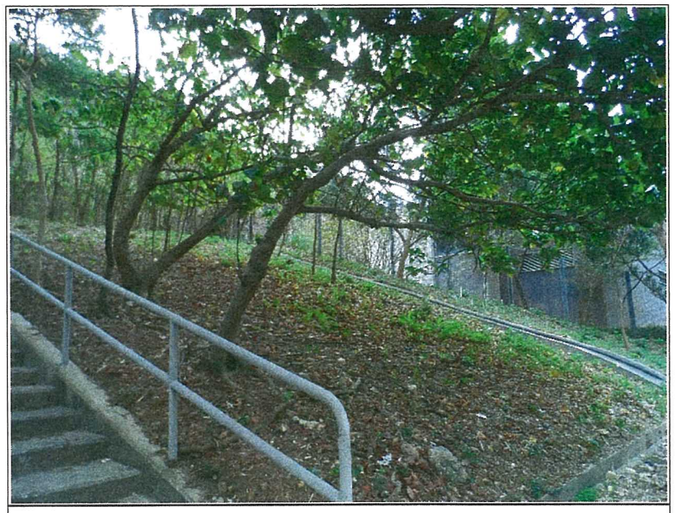
LR6.1 Woodland on the North of Pak Shing Kok near to Site SKI-6



LR6.2 Shrubland / Grassland on the North of Pak Shing Kok near at Site SKI-6



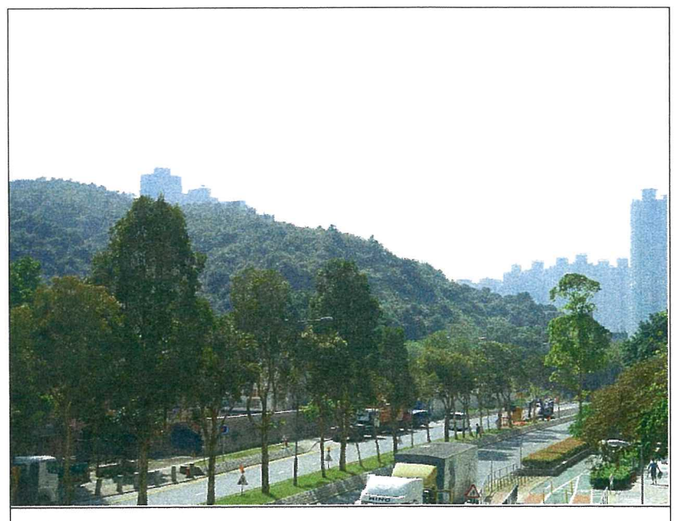
LR6.3 Plantation along Chiu Shan Road near to Site SKI-6



LR6.3 Plantation on Pak Shing Kok at Site SKI-6



LR6.3 Plantation on Pak Shing Kok at Site SKI-6



LR6.5 Roadside Planting along Chiu Shun Road near to Site SKI-6

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Landscape resources photos – site SKI-6
(sheet 1 of 3)

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LR6.6a Open Space at Pui Shing Garden near to Site SKI-6



LR6.6b Open Space at Hang Hau Garden near to Site SKI-6



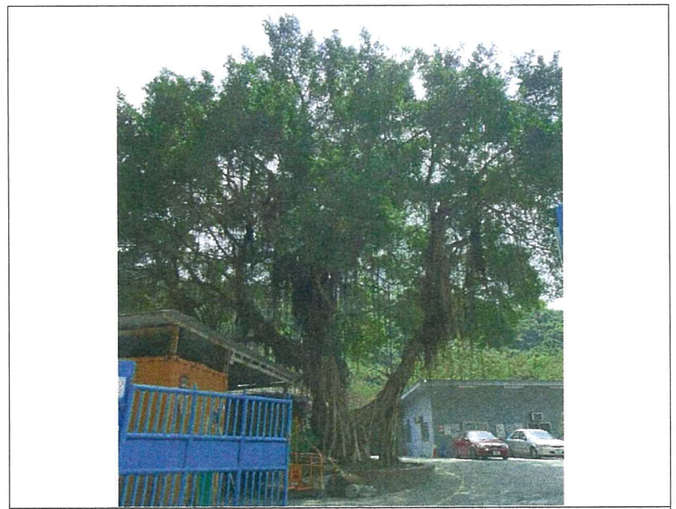
LR6.6c Open Space at Hang Hau Man Kuk Lane Park near to Site SKI-6



LR6.6d Open Space at Tseung Kwan O Sports Ground near to Site SKI-6



LR6.6e Open Space at Hong Kong Velodrome Park near to Site SKI-6



LR6.9 Important Trees & Rare and Precious Species at Site SKI-6 near to the North of Pak Shing Kok - IT-0601 *Ficus microcarpa*, 15m (height), 20m (crown spread), 2m (DBH)

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Landscape resources photos – site SKI-6
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LR6.11 Grassland near to Site SKI-6

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Landscape resources photos –
site SKI-6
(sheet 3 of 3)

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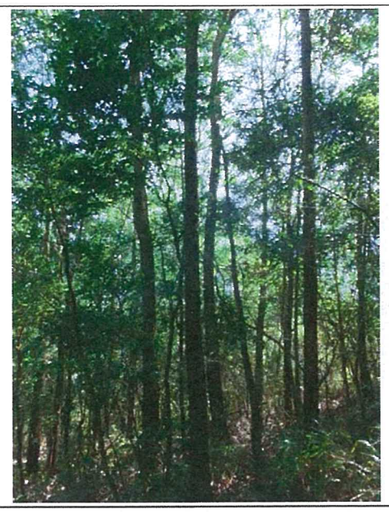
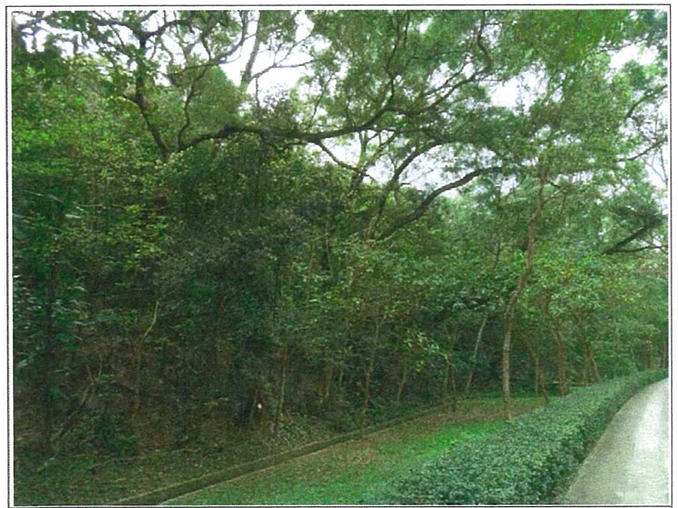
LR11.1 Woodland on Razor Hill at Site SKI-11



LR11.1 Woodland on Razor Hill Woodland at Site SKI-11



LR11.3 Plantation on Razor Hill at Site SKI-11



LR11.3 Plantation on Razor Hill at Site SKI-11



LR11.3 Plantation on Razor Hill at Site SKI-11



LR11.4 Shrubland on Razor Hill near to Site SKI-11

Rev	Description	By	Date

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Landscape resources photos – site SKI-11
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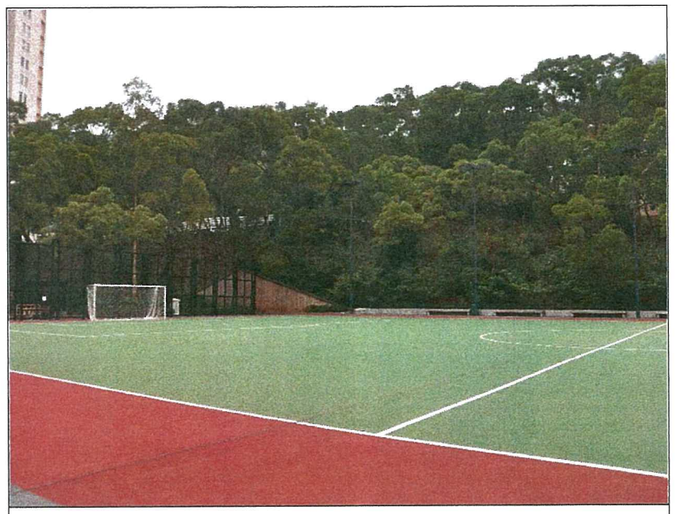
LR11.5 Roadside Planting along Po Lam Road North near to Site SKI-11



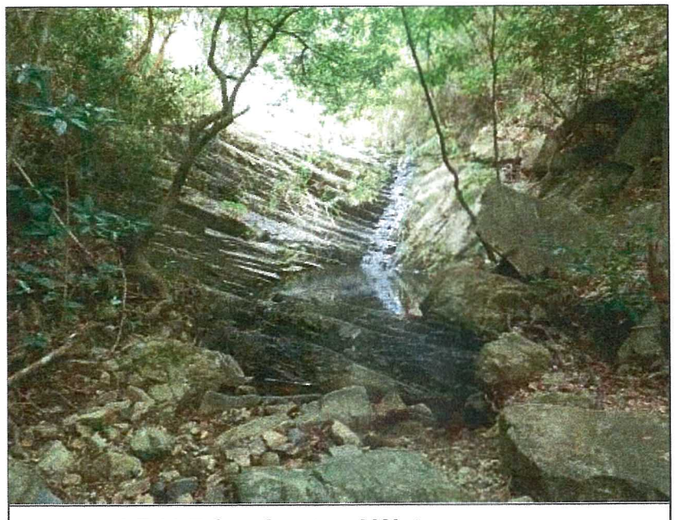
LR11.5 Roadside Planting along Yau Yuen Wan Village Road near to Site SKI-11



LR11.6a Open Space at Yau Yue Wan Playground near to Site SKI-6



LR11.6b Open Space at Po Tsui Park near to SKI-6



LR11.7 Semi-natural Watercourse on Razor Hill near to Site SKI-11



LR11.9 Important Trees & Rare and Precious Species on Razor Hill near to Site SKI-11 - *Rhododendron* sp.

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Drawing title

Landscape resources photos – site SKI-11
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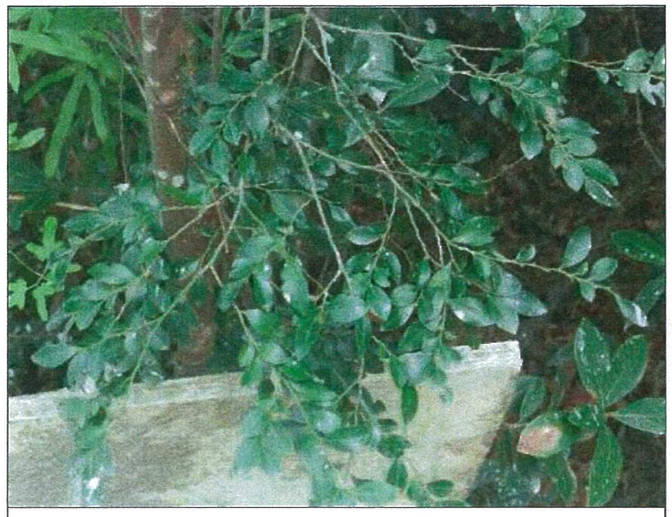
LR11.9 Important Trees & Rare and Precious Species on Razor Hill at Site SKI-11
- Aquilaria sinensis



LR11.9 Important Trees & Rare and Precious Species on Razor Hill near to Site SKI-11
- Diospyros vaccinioides

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Landscape resources photos – site SKI-11
(sheet 3 of 3)

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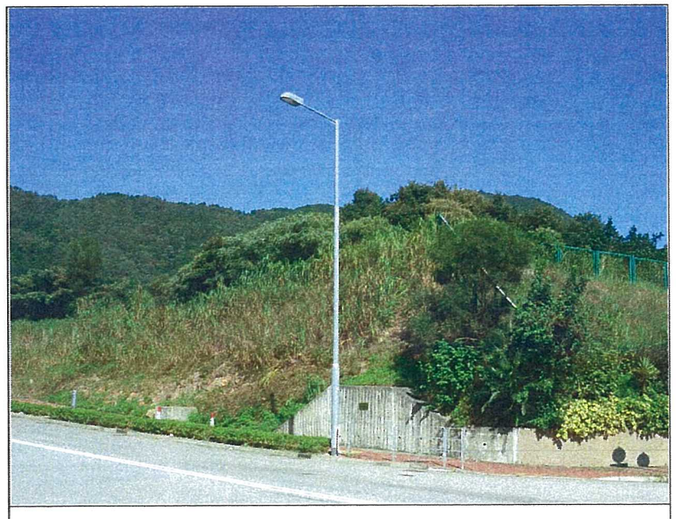
LR12.1 Woodland on Siu Chik Sha near to Site SKI-12



LR12.1 Woodland on Siu Chik Sha near to Site SKI-12



LR12.1 Woodland on Siu Chik Sha near to Site SKI-12



LR12.2 Shrubland / Grassland on Siu Chik Sha at Site SKI-12



LR12.3 Plantation on Siu Chik Sha near to Site SKI-12



LR12.6 Open Space at Wan Po Road Pet Garden near at Site SKI-12

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Landscape resources photos – site SKI-12
(sheet 1 of 3)

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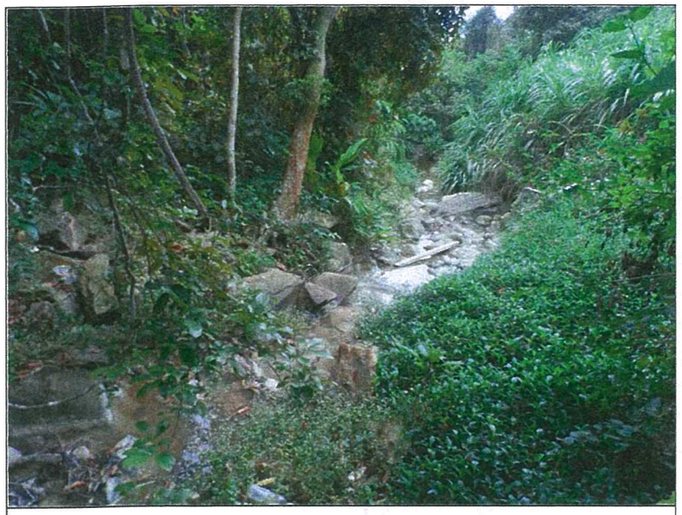
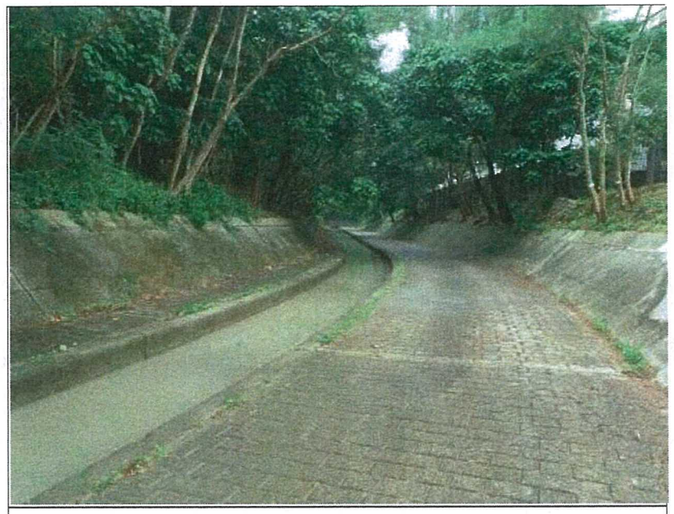


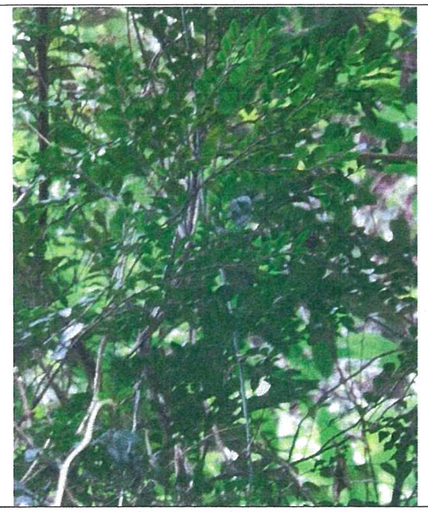
LR12.7 Semi-natural Watercourse near to Site SKI-12



LR12.7 Semi-natural Watercourse near to Site SKI-12



LR12.8 Channelised Watercourse on Siu Chik Sha near to Site SKI-12



LR12.9 Important Trees & Rare and Precious Species on Siu Chik Sha near to Site SKI-12
- Diospyros vaccinioides



LR12.9 Important Trees & Rare and Precious Species on Siu Chik Sha at Site SKI-12
- Aquilaria sinensis



LR12.9 Important Trees & Rare and Precious Species on Siu Chik Sha at Site SKI-12
- Diospyros vaccinioides

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Agreement No. NTE/10/2015
Landscape Assessment for Potential Housing Sites in the vicinity of Tseung Kwan O Feasibility Study

Drawing title

Landscape resources photos – site SKI-12
(sheet 2 of 3)

Drawing no.		Rev.
FIGURE 5.2.7		
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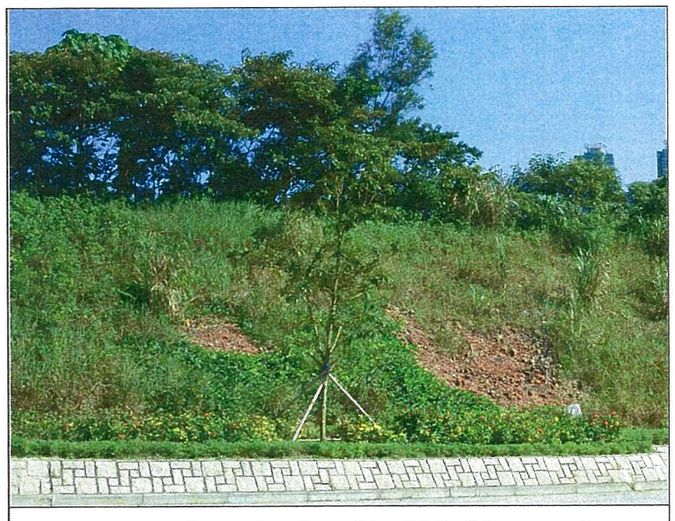
LR12.9 Important Trees & Rare and Precious Species on Siu Chik Sha at Site SKI-12
- Gentum luofuense



LR12.9 Important Trees & Rare and Precious Species on Siu Chik Sha at Site SKI-12
- Ormosia pachycarpa



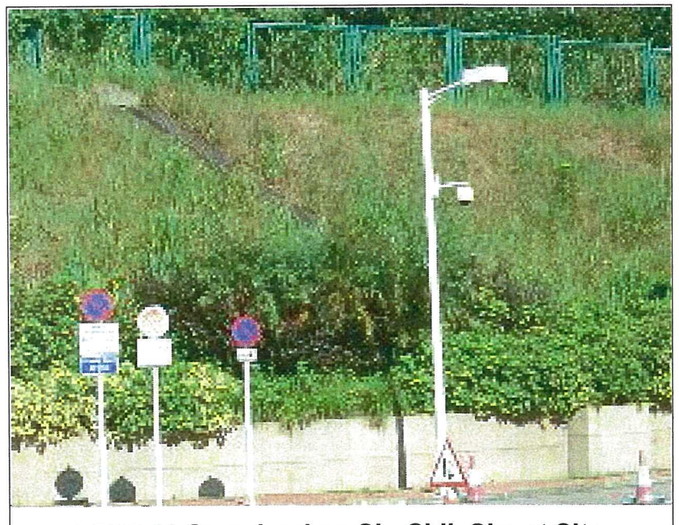
LR12.9 Important Trees & Rare and Precious Species on Siu Chik Sha at Site SKI-12
- Pavetta hongkongensis



LR12.11 Grassland on Siu Chik Sha near to Site SKI-12



LR12.11 Grassland along Pak Shing Kok Road at Site SKI-12



LR12.11 Grassland on Siu Chik Sha at Site SKI-12

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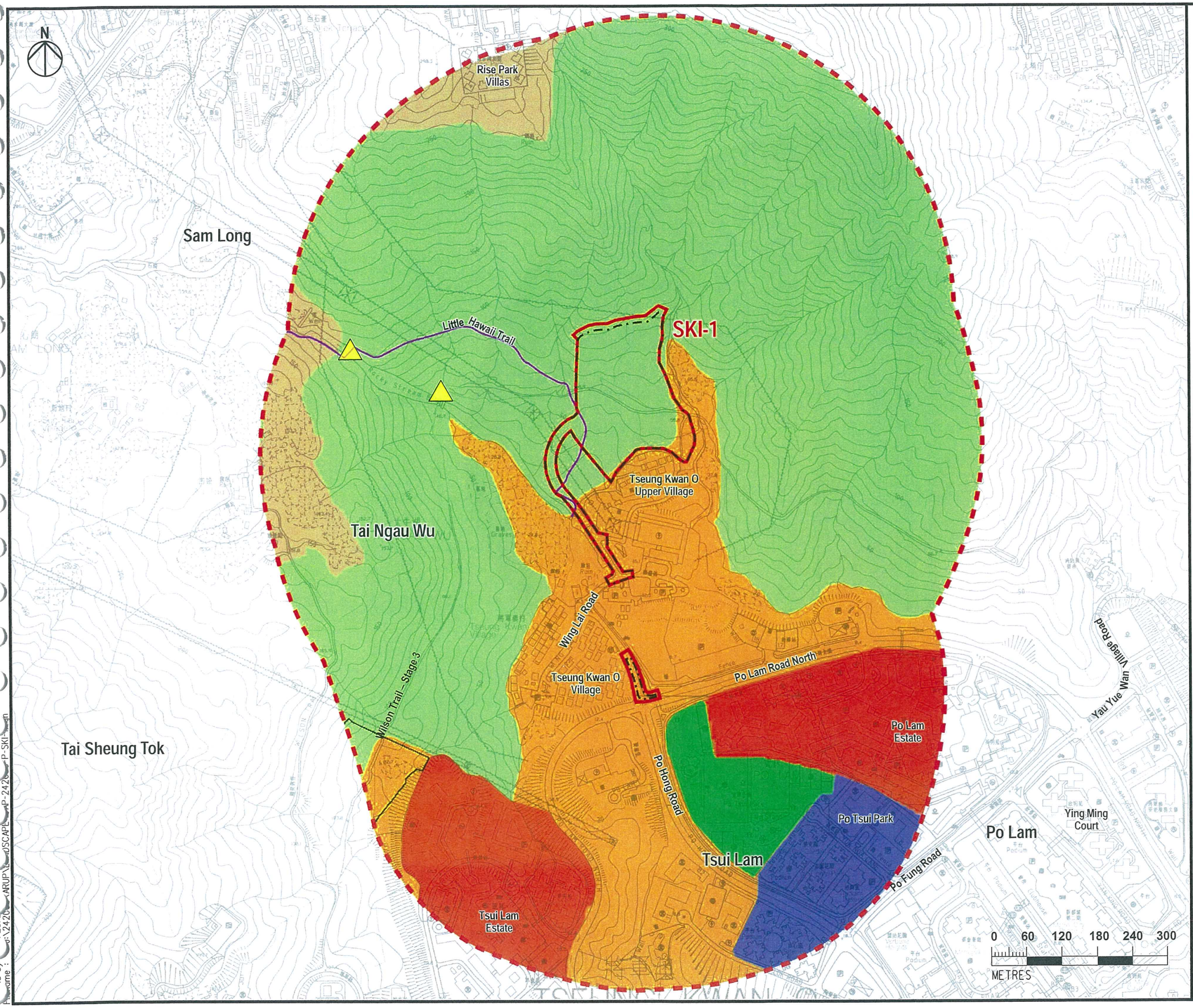

Legend

- 500m Assessment Area
- Study Area
- Affected Area
- LCA1.1 Peaks, Upland and Hillside Landscape
- LCA1.2 Urban Recreational Landscape
- LCA1.4 Miscellaneous Rural Fringe Landscape
- LCA1.5 Miscellaneous Urban Fringe Landscape
- LCA1.6 Residential Urban Landscape
- LCA1.7 Mixed Modern Comprehensive Urban Development Landscape
- Waterfall Location

Rev	Description	By	Date

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Landscape character areas plan – site SKI-1

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N

Legend

- 500m Assessment Area
- Study Area
- Affected Area

- LCA2.1 Peaks, Upland and Hillside Landscape
- LCA2.2 Urban Recreational Landscape
- LCA2.3 Unban Peripheral Village Landscape
- LCA2.5 Miscellaneous Urban Fringe Landscape
- LCA2.6 Residential Urban Landscape
- LCA2.7 Mixed Modern Comprehensive Urban Development Landscape

Yau Yue Wan Village Road
Yau Yue Wan Village
Ying Ming Court
Po Fung Road
Yan Ming Court
Po Lam Road North
Ap Tsai Shan (Duckling Hill)
Clearwater Bay Road
Silverstrand
Silverstrand Beach
Ying Yip Road
SKI-2
Metro City Phase 2
MTR Po Lam Station
The Metropolis
Metro City Phase 1
Wan Hang Road
King Lam Estate
Hang Hau Village Resite
Hang Hau
Fu Ning Garden
Po Hong Park
Hau Tak Estate
Yu Ming Court
Po Ning Road
Tseung Kwan O Hospital
Tseung Kwan O Swimming Pool
Ming Tak Estate
East Point City
MTR Hang Hau Station
Chiu Shun Road
Yuk Ming Court
Wan Po Road
Hong Kong Velodrome Park
Nan Fung Plaza

0 100 200 300 400 500
METRES

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Landscape character areas plan – site SKI-2

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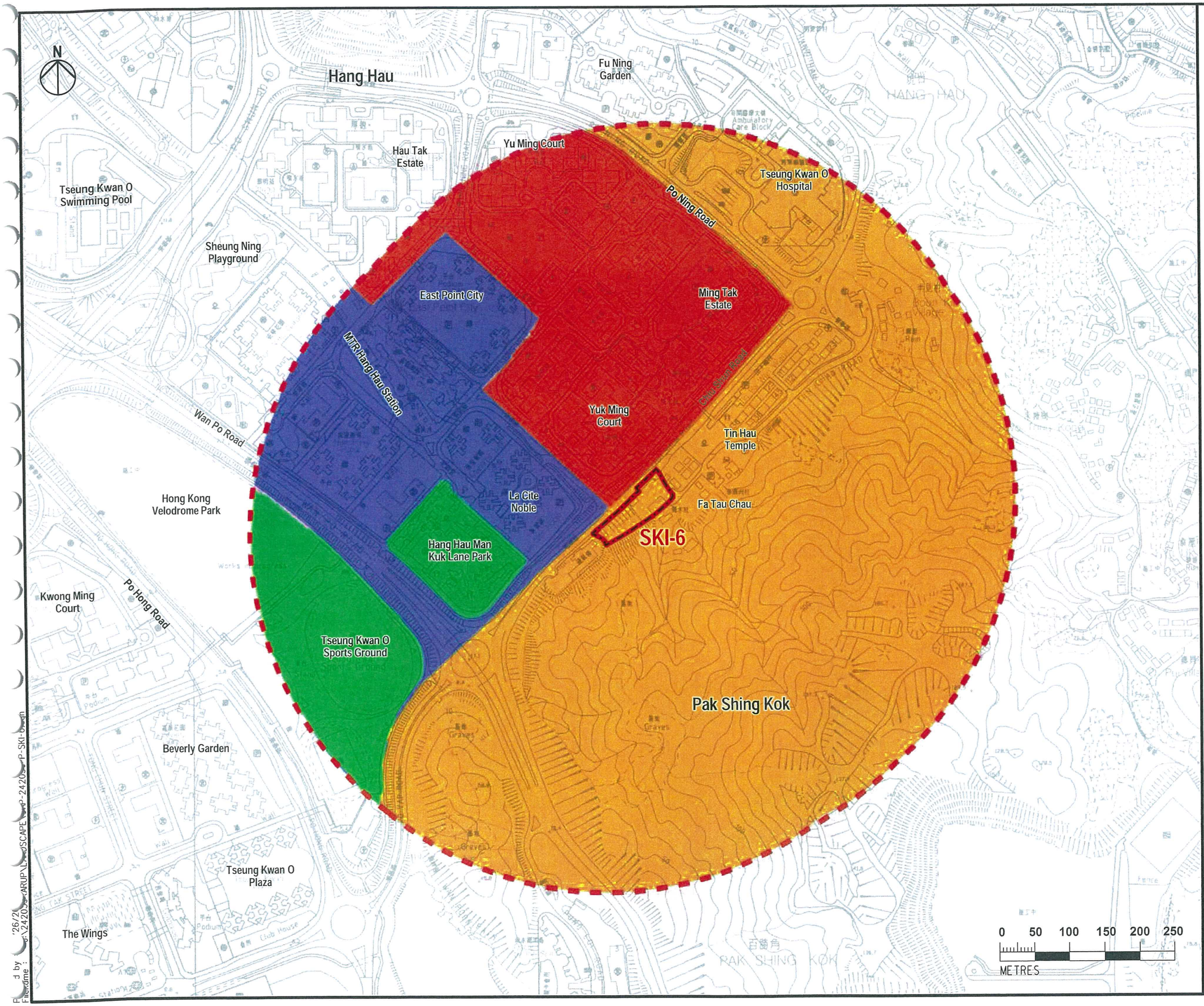

Legend

- 500m Assessment Area
- Study Area
- Affected Area

- LCA6.2 Urban Recreational Landscape
- LCA6.5 Miscellaneous Urban Fringe Landscape
- LCA6.6 Residential Urban Landscape
- LCA6.7 Mixed Modern Comprehensive Urban Development Landscape

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Landscape character areas plan – site SKI-6

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N

SKI-11

Tseung Kwan O Village

Po Lam Road North

Po Lam Estate

Ying Ming Court

Village Road

Yau Yue Wan

Yau Yue Wan Village

Po Tsui Park

Po Lam

Yan Ming Court

Po Lam Road North

Ap Tsai Shan (Duckling Hill)

Tsui Lam

Po Fung Road

Verbena Heights

The Metropolis

MTR Po Lam Station

Metro City Phase 2

Metro City Phase 1

King Lam Estate

SEUNG KWAN O

0 50 100 150 200 250

METRES

Legend

- 500m Assessment Area
- Study Area
- Affected Area

- LCA11.1 Peaks, Upland and Hillside Landscape
- LCA11.2 Urban Recreational Landscape
- LCA11.3 Unban Peripheral Village Landscape
- LCA11.5 Miscellaneous Urban Fringe Landscape
- LCA11.6 Residential Urban Landscape
- LCA11.7 Mixed Modern Comprehensive Urban Development Landscape

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Landscape character areas plan – site SKI-11

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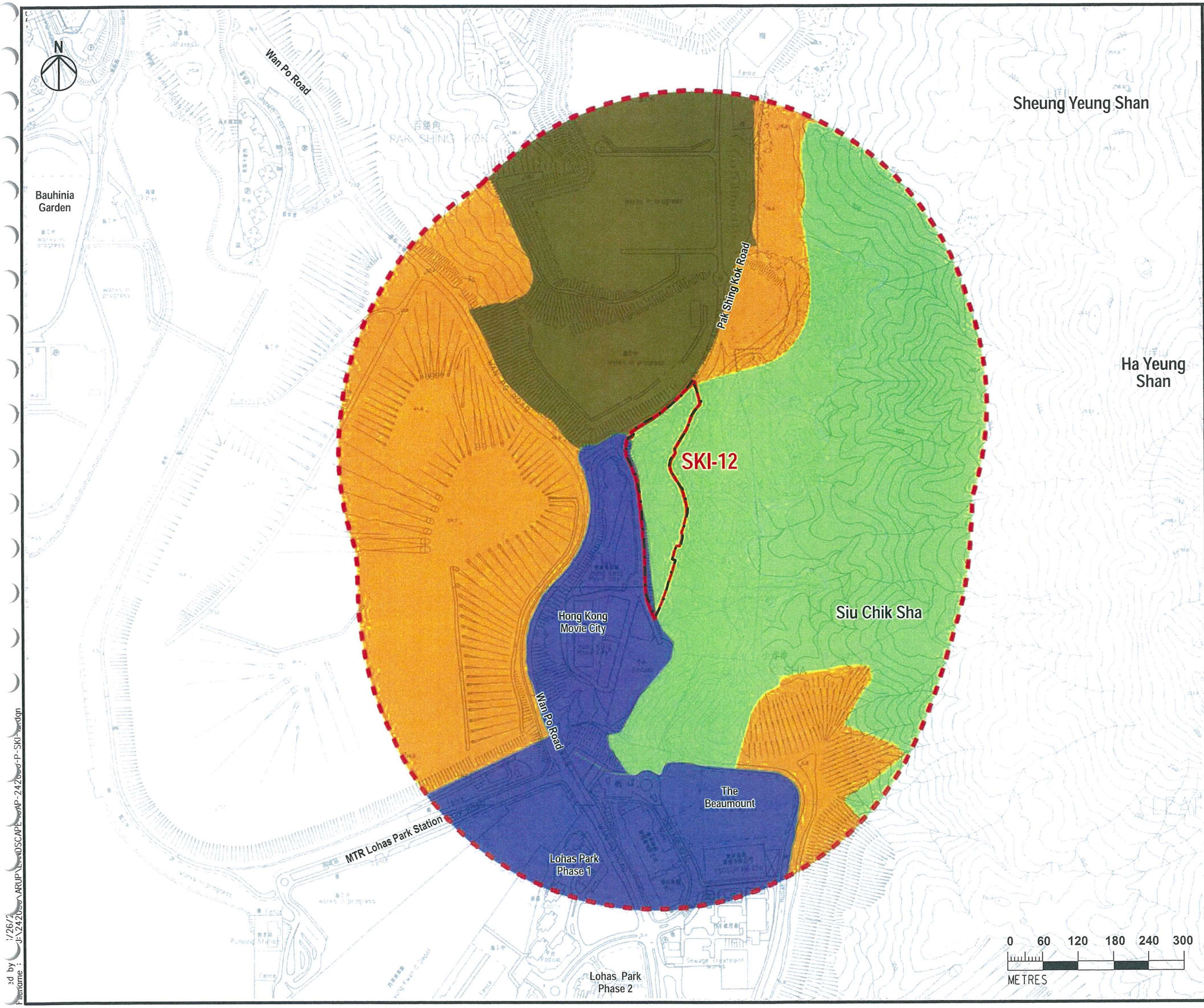

Legend

- 500m Assessment Area
- Study Area
- Affected Area

- LCA12.1 Peaks, Upland and Hillside Landscape
- LCA12.5 Miscellaneous Urban Fringe Landscape
- LCA12.7 Mixed Modern Comprehensive Urban Development Landscape
- LCA12.9 Ongoing Major Development Landscape

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Landscape character areas plan – site SKI-12

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FIGURE 5.3.7			
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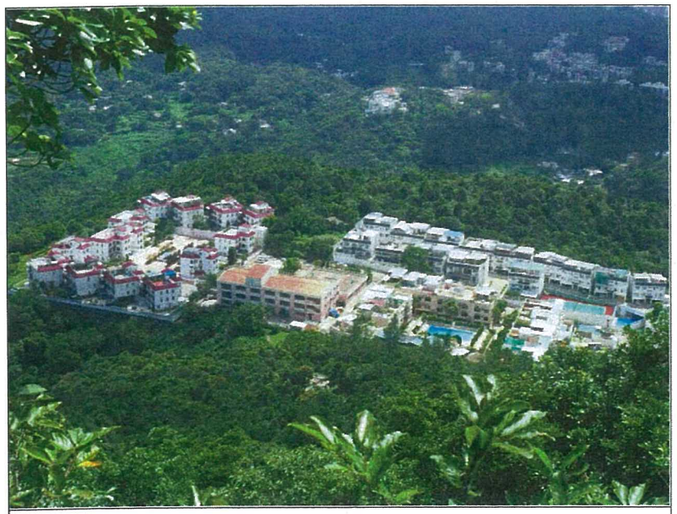
LCA1.1 Peaks, Upland and Hillside Landscape



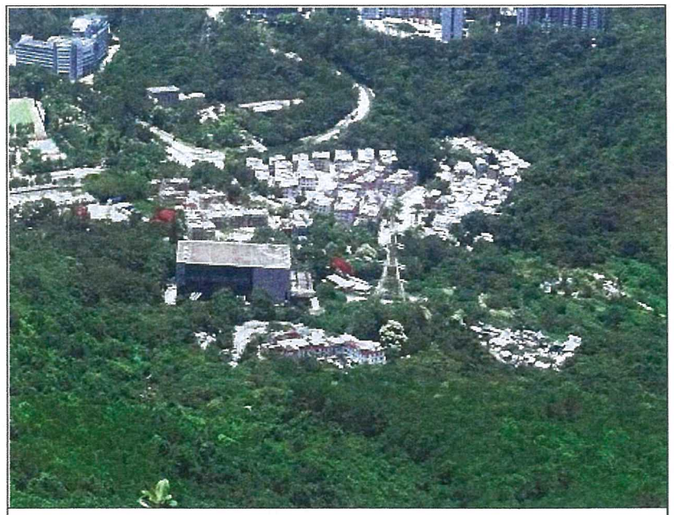
LCA1.2 Urban Recreational Landscape at Po Tsui Park



LCA1.2 Urban Recreational Landscape at Hong Kong Velodrome Park



LCA1.4 Miscellaneous Rural Fringe Landscape



LCA1.5 Miscellaneous Urban Fringe Landscape Tseung Kwan O Village



LCA1.6 Residential Urban Landscape

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A	REVISED FINAL	EL	11/16
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Landscape character areas photos – site SKI-1

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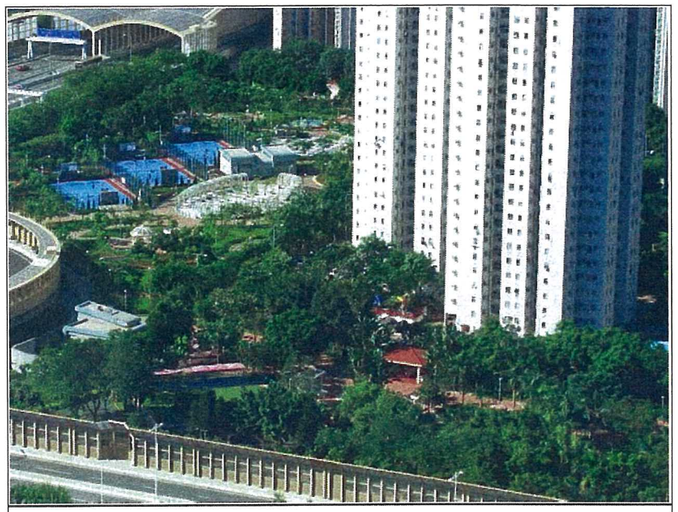
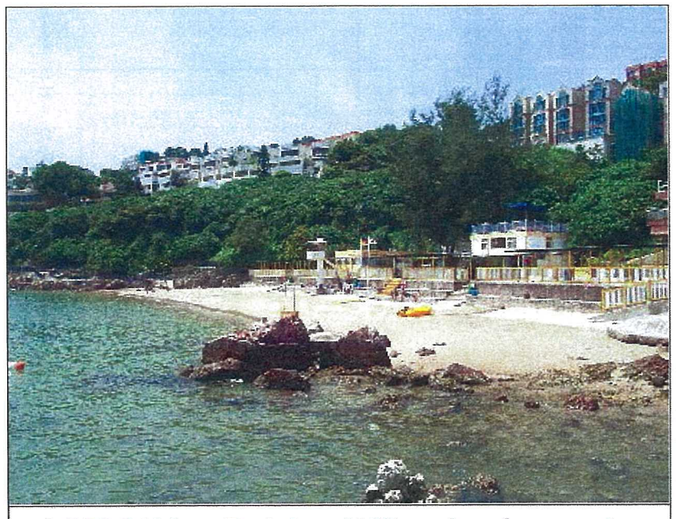
LCA2.1 Peaks, Upland and Hillside Landscape



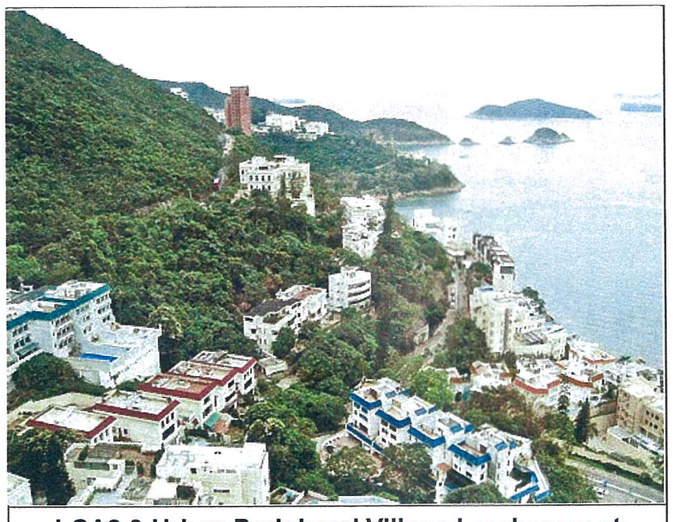
LCA2.2 Urban Recreational Landscape at Tseung Kwan O Swimming Pool



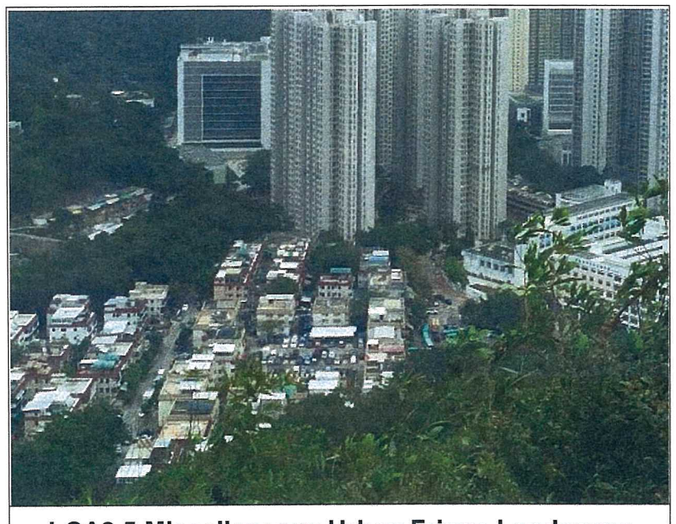
LCA2.2 Urban Recreational Landscape at Sheung Ning Playground



LCA2.3 Urban Peripheral Village Landscape at Silverstrand Beach



LCA2.3 Urban Peripheral Village Landscape at Silverstrand



LCA2.5 Miscellaneous Urban Fringe Landscape

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Landscape character areas photos – site SKI-2 (sheet 1 of 2)

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LCA2.6 Residential Urban Landscape at Hang Hau



LCA2.7 Mixed Modern Comprehensive Urban Development Landscape

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Landscape character areas photos – site SKI-2 (sheet 2 of 2)

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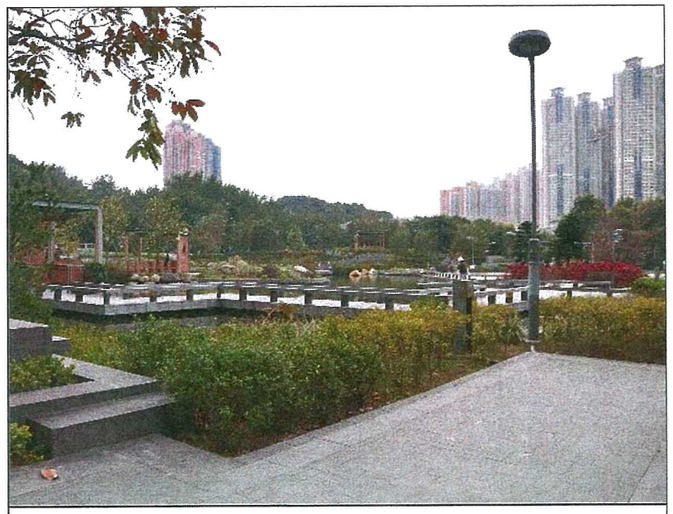

LCA6.2 Urban Recreational Landscape at Hang Hau Man Kuk Lane Park



LCA6.2 Urban Recreational Landscape at Tseung Kwan O Sports Ground



LCA6.5 Miscellaneous Urban Fringe Landscape



LCA6.6 Residential Urban Landscape at Hang Hau



LCA6.7 Mixed Modern Comprehensive Urban Development Landscape

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-	FINAL	EL	08/16

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Landscape character areas photos – site SKI-6

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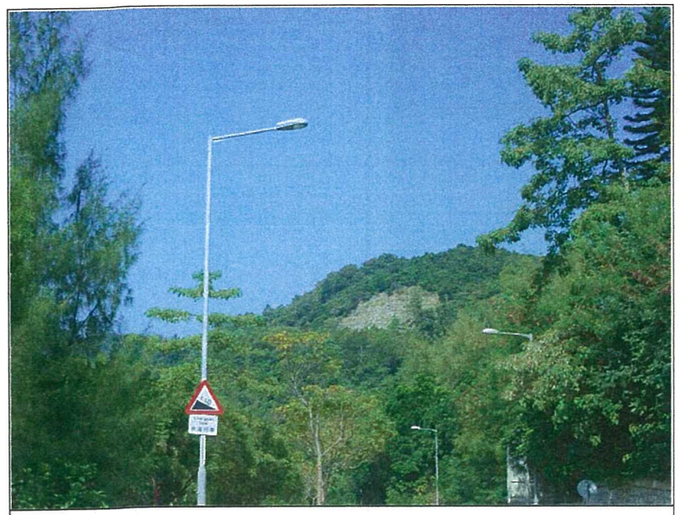
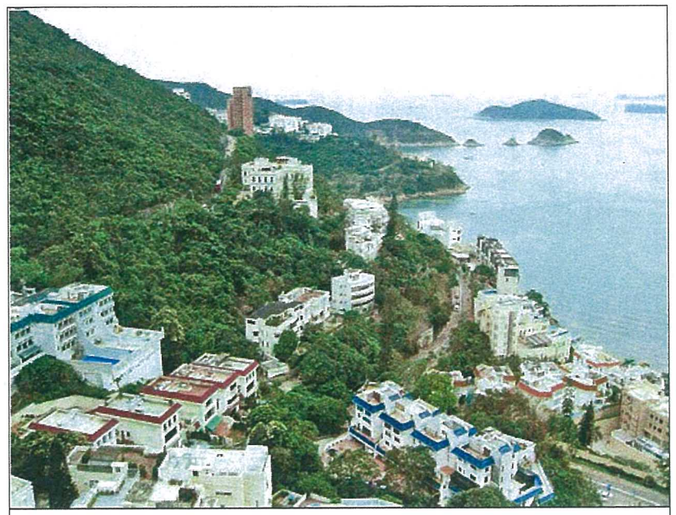


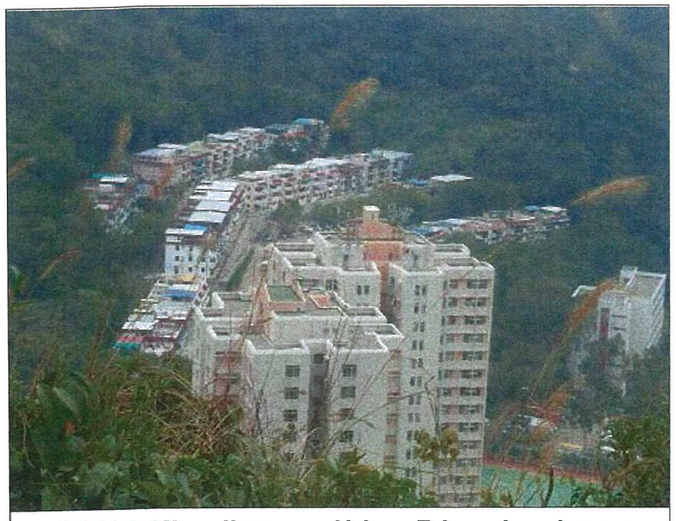
LCA11.1 Peaks, Upland and Hillside Landscape



LCA11.2 Urban Recreational Landscape at Po Tsui Park



LCA11.3 Urban Peripheral Village Landscape at Silverstrand



LCA11.5 Miscellaneous Urban Fringe Landscape



LCA11.6 Residential Urban Landscape



LCA11.7 Mixed Modern Comprehensive Urban Development Landscape

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Landscape character areas photos – site SKI-11

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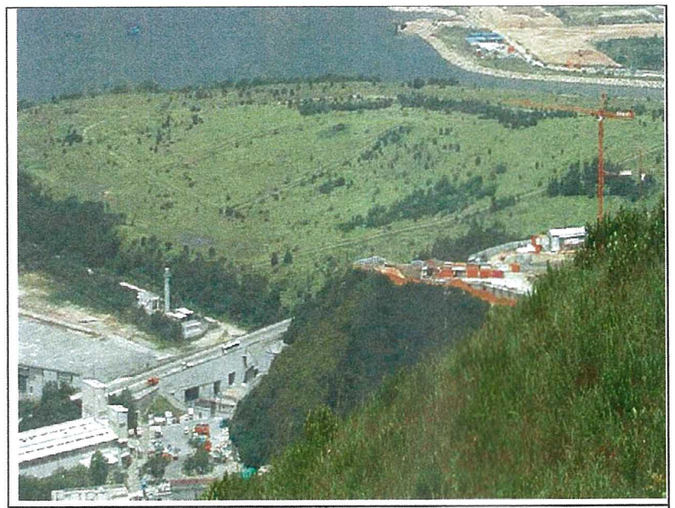
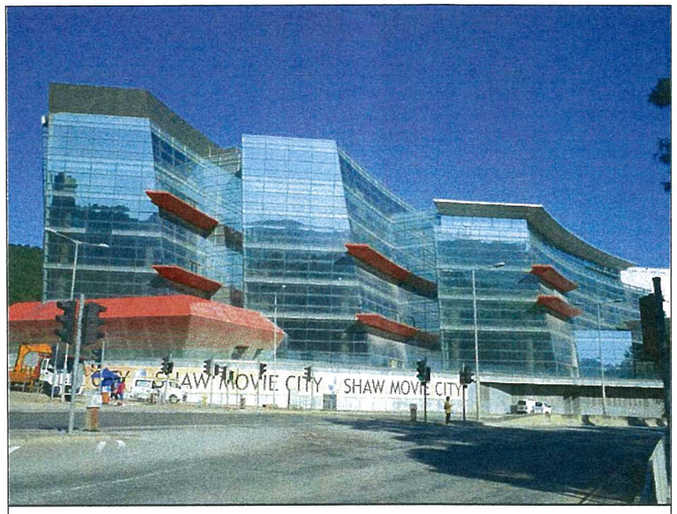
LCA12.1 Peaks, Upland and Hillside Landscape



LCA12.5 Miscellaneous Urban Fringe Landscape



LCA12.7 Mixed Modern Comprehensive Urban Development Landscape



LCA12.9 Ongoing Major Development Landscape

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Landscape Assessment for Potential Housing Sites in the vicinity of Tseung Kwan O Feasibility Study

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Landscape character areas photos – site SKI-12

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CONSTRUCTION STAGE	
CM01	Minimised works area and reinstatement of pedestrian access, footpath and hiking trails
CM02	Construction period reduced to practical minimum
CM03	Construction traffic reduced to practical minimum
CM04	Protection and preservation of the existing trees - trees / woodland within the site working area will be protected and preserved as far as possible in accordance with DEVB TCW No. 7/2015 and ETWB TCW No. 29/2004
CM05	Existing trees of good quality and condition that are unavoidably affected by the works shall be transplanted
CM06	Existing rare species of good quality and condition that are unavoidably affected by the works shall be transplanted to nearby undisturbed woodland patches or compensation woodland
CM07	Existing topsoil shall be re-used where possible for new planting areas within the project
CM08	Buffer zone of roughly 15m between watercourse for reservation of wooded riparian zone for preservation of unauthorized access and disturbance to the watercourse
CM09	Existing watercourses of good quality and condition that are unavoidably affected by the works shall be replaced and diverted to proposed trapezoidal green channel (subject to detail design development)

OPERATION PHASE	
OM01 ***	Landscape treatments on natural terrain hazard mitigation barriers to enhance the landscape amenity value of proposed man made slope
OM02*	Maximize soft landscape within site
OM03**	Implementation of greening measures e.g. roadside planting and provision of green coverage within the proposed development and associated infrastructure
OM04*	Sensitive design of streetscape, vertical greening, landscape treatment on slope and buffer zone shall be compatible with surrounding context
OM05	Reinstatement of disturbed areas during construction to match adjacent area or condition to suit future landuses
OM06	Compensatory tree planting shall be incorporated into the proposed housing site, engineering slope and associated infrastructure works where space is available
OM07	woodland compensation
OM08	Proper horticultural maintenance of greening, shrub planting and tree planting to facilitate the growth performance
OM09	A buffer zone of roughly 15m between watercourse for reservation of wooded riparian zone for preservation of unauthorized access and disturbance to the watercourse
OM10	Maintenance of green channel
OM11	Sensitive chromatic design of hard landscape with subdued earth colour finished to blend into existing vegetated landscape to suit future land uses as possible.
OM12	Post-transplant monitoring and establishment works shall be carried out to the transplanted rare floral species.

GREENING MEASURES within Housing Site	
GM01	Man-made slope treatment adopting native tree planting
GM02	Vertical greening (2.5m height max.)
GM03	Green roof at refuse collection point & covered walkway
GM04	Ornamental planting with diverse vegetation composition
GM05	Grass paver at car parking lots (except basement car park)
GM06	Transitional planting
GM07	Open space with chromatic design of hard landscape
GM08	Reprovision of pedestrian access, footpath & hiking trails
GM09	Planting for screening from traffic

Note:

* Conceptual Streetscape Design and Landscape Treatment on Slope refer to Appendix C1, C2, C3 and C4 accordingly.

** The greening ratio for all housing sites will comply with Site Coverage of Greenery for Government Building Projects (DEVB TCW No. 3/2012), guiding principles on green coverage for public housing Development in Hong Kong, and Hong Kong Planning Standards and Guidelines particularly Chapter 4 (2015).

*** Typical landscape treatments on natural terrain hazard mitigation barriers refer to Appendix C3 accordingly.

Remark: The funding, implementation and maintenance agency will be determined in the detail design stage of the project.

Rev	Description	By	Date

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Drawing title

Proposed Mitigation Measures

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FIGURE 7.1.1		-
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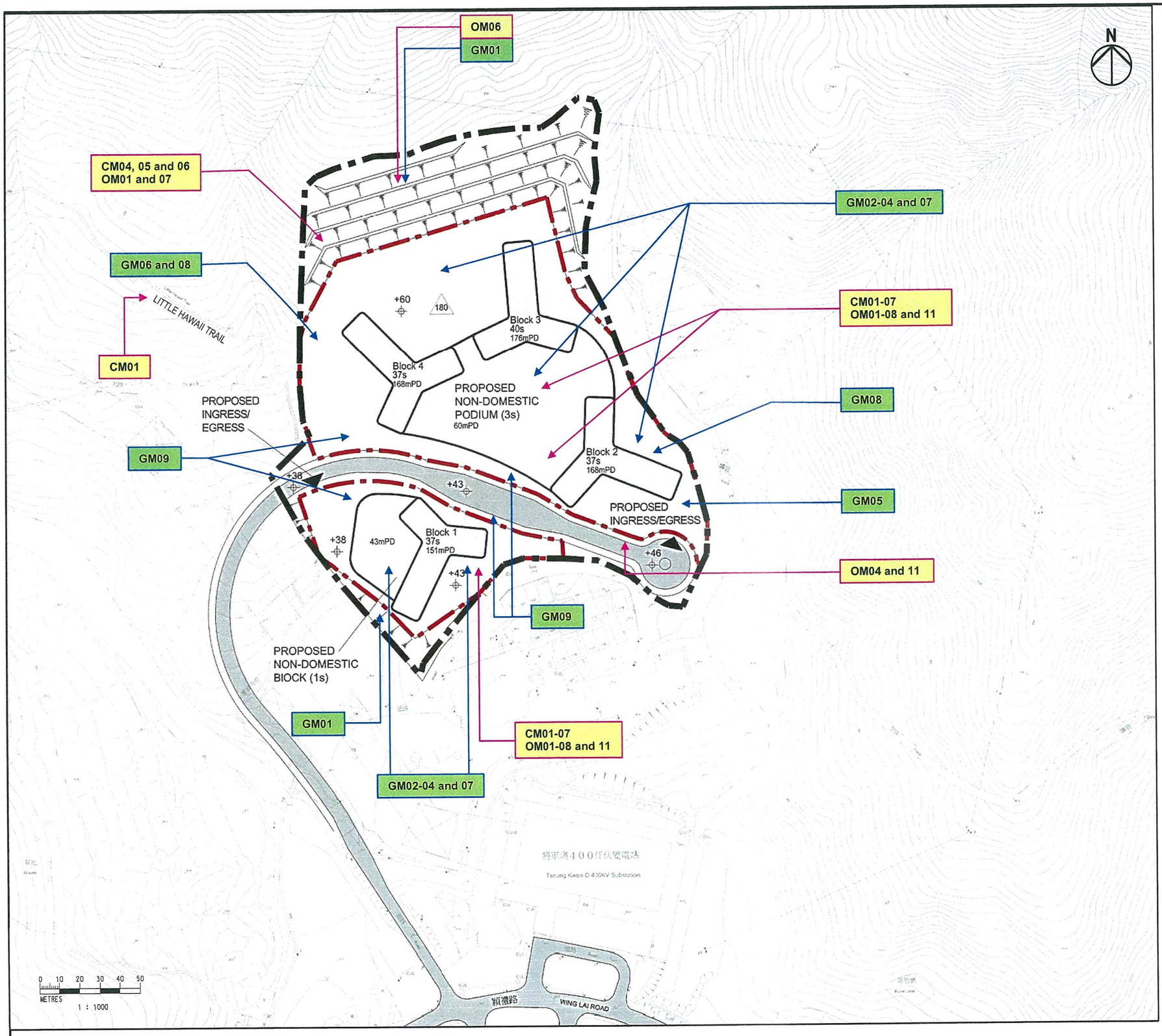

* *the proposed greenery measures are indicative and subject to detail design.*

Indicative Boundary of Housing Site

Proposed Public Housing Site Area (subject to detail design)

NOTE: Proposed Mitigation Measures is listed on **Figure 7.1.1.** The conceptual layout plan and slope profile will be subjected to design and change at the next stage. Greening measures of visual illustration also provided in **Appendix C1, C2, C3 and C4**.

Rev	Description	By	Date

Consultant

ARUP

Agreement No. NTE/10/2015
Landscape Assessment for Potential Housing Sites in the vicinity of Tseung Kwan O Feasibility Study

Drawing title

Proposed mitigation measures – conceptual layout plan of site SKI-1 - north of Tseung Kwan O Village

Drawing no		Rev.
FIGURE 7.1.2		-
Drawn: KW	Date: 04/16	Checked: EL / Approved: EL
Scale: 1 : 1000 @ A1	Status:	

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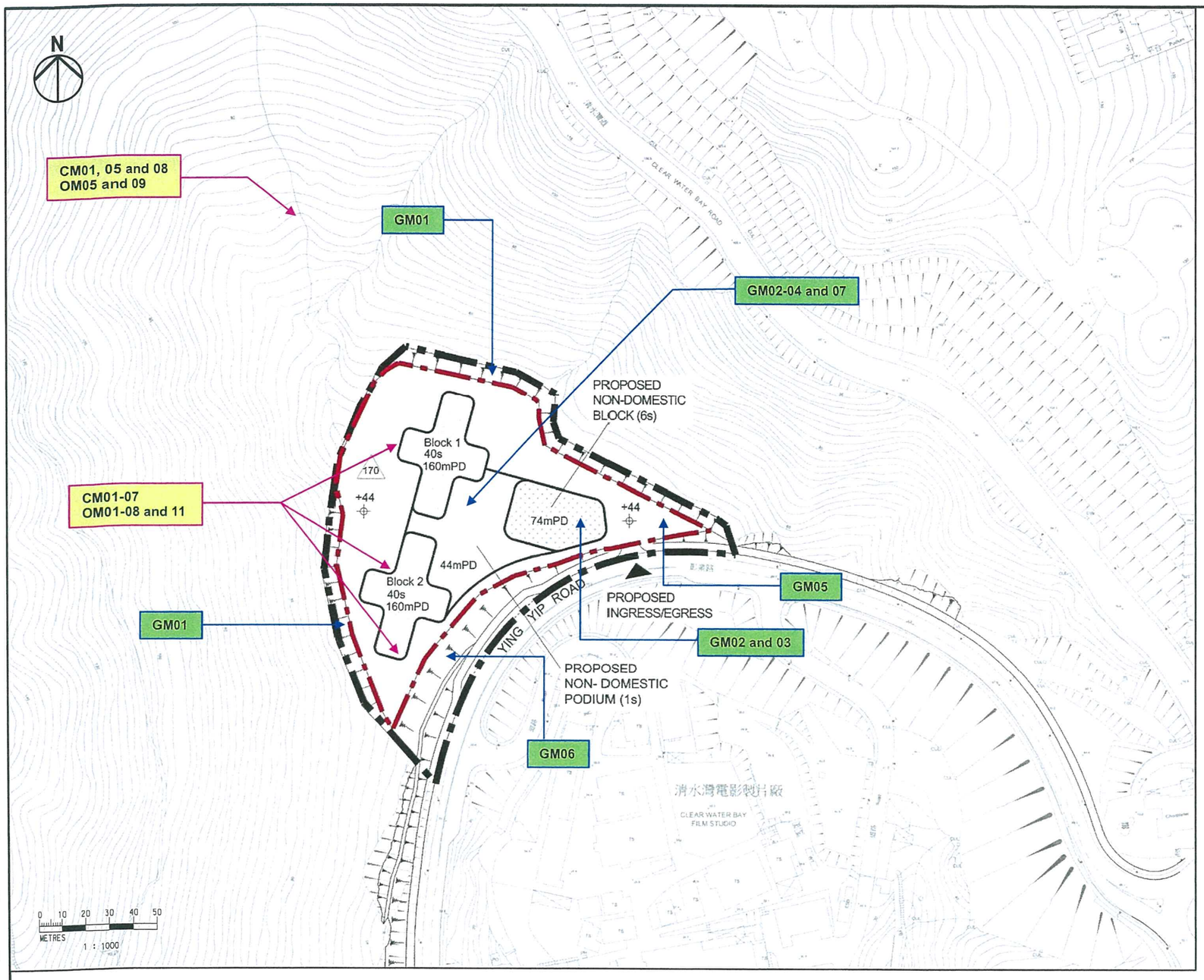

** the proposed greenery measures are indicative and subject to detail design.*

0 10 20 30 40 50
METRES
1 : 1000

Indicative Boundary of Housing Site

Proposed Public Housing Site Area (subject to detail design)

NOTE: Proposed Mitigation Measures is listed on **Figure 7.1.1.** The conceptual layout plan and slope profile will be subjected to design and change at the next stage. Greening measures of visual illustration also provided in **Appendix C1, C2, C3 and C4**.

Rev	Description	By	Date

Consultant

ARUP

Agreement No. NTE/10/2015
Landscape Assessment for Potential Housing Sites in the vicinity of Tseung Kwan O Feasibility Study

Drawing title

Proposed mitigation measures – conceptual layout plan of site SKI-2 - northwest of Ying Yip Road

Drawing no.			Rev.
FIGURE 7.1.3			-
Drawn: KW	Date: 04/16	Checked: EL	Approved: EL
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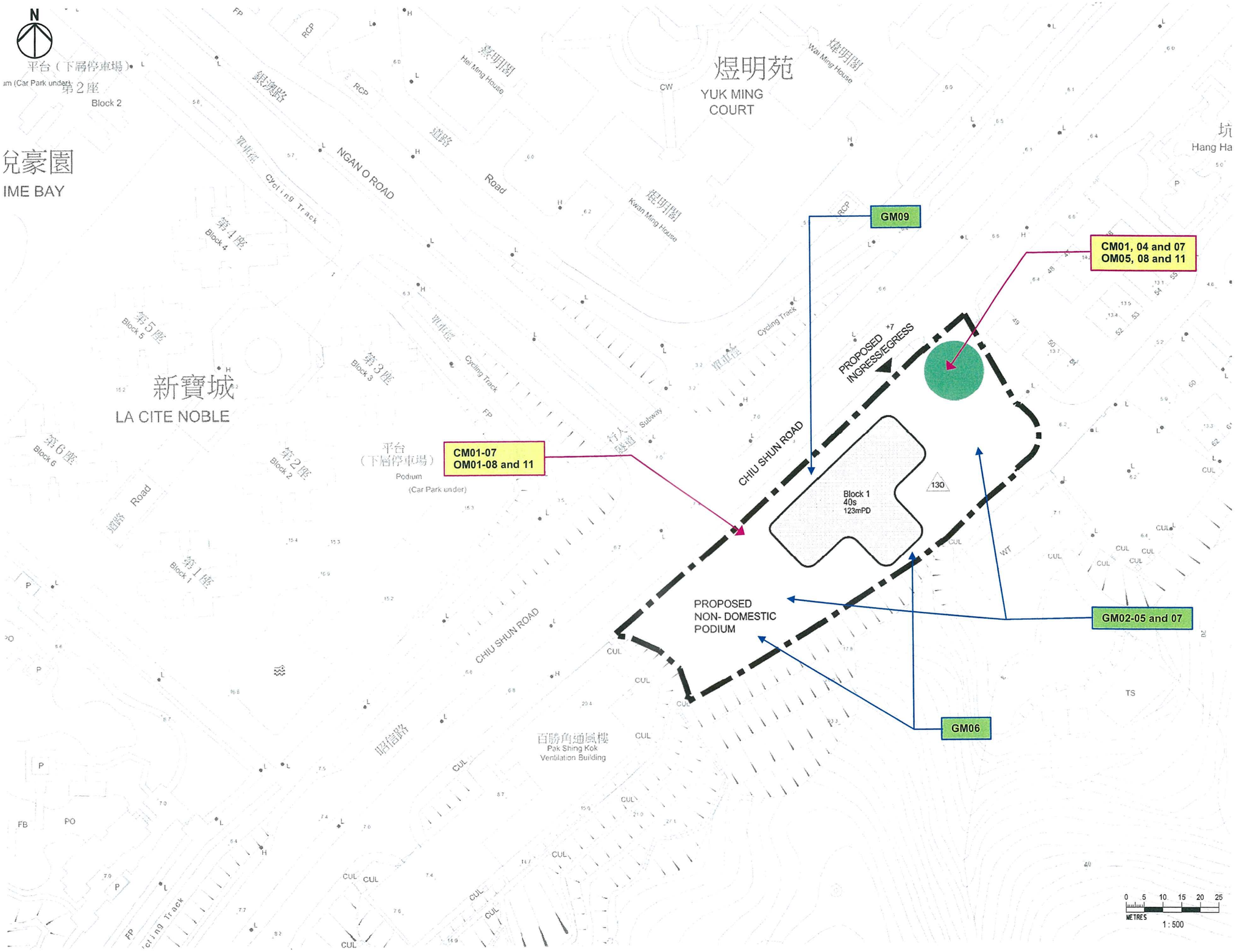

** the proposed greenery measures are indicative and subject to detail design.*

Indicative Boundary of Housing Site

PROPOSED PRESERVED IMPORTANT TREE WITH LARGE TRUNK ≥ 1m (IT-0601 *Ficus Microcarpa*)

NOTE: Proposed Mitigation Measures is listed on **Figure 7.1.1.** The conceptual layout plan and slope profile will be subjected to design and change at the next stage. Greening measures of visual illustration also provided in **Appendix C1, C2, C3 and C4**.

Rev	Description	By	Date

Consultant

ARUP

Agreement No. NTE/10/2015
Landscape Assessment for Potential Housing Sites in the vicinity of Tseung Kwan O Feasibility Study

Drawing title

Proposed mitigation measures – conceptual layout plan of site SKI-6 - south of Chiu Shun Road

Drawing no		Rev.
FIGURE 7.1.6		-
Drawn: KW	Date: 04/16	Checked: EL / Approved: EL
Scale: 1 : 500 @ A1	Status:	

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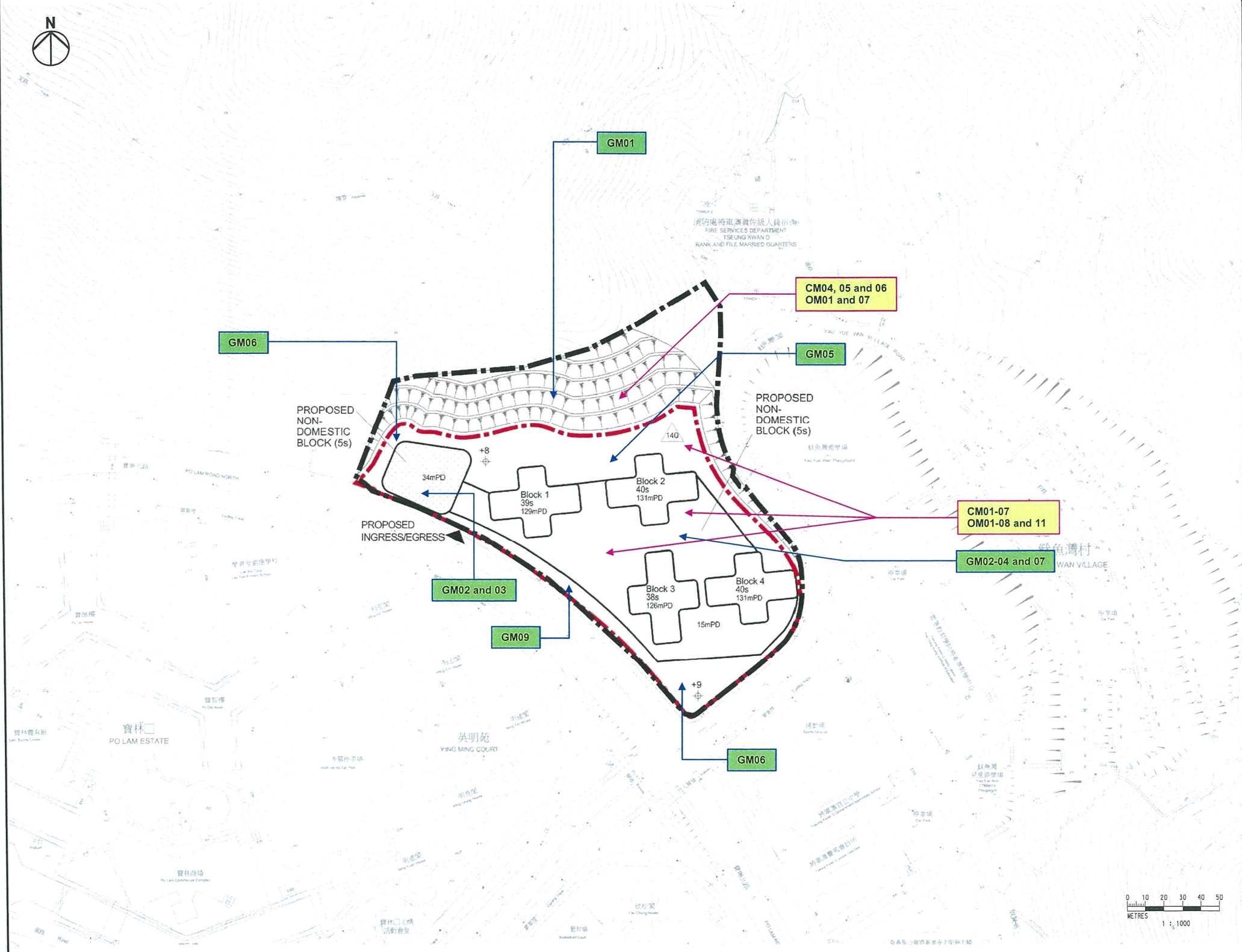

** the proposed greenery measures are indicative and subject to detail design.*

Indicative Boundary of Housing Site

Proposed Public Housing Site Area (subject to detail design)

NOTE: Proposed Mitigation Measures is listed on **Figure 7.1.1.** The conceptual layout plan and slope profile will be subjected to design and change at the next stage. Greening measures of visual illustration also provided in **Appendix C1, C2, C3 and C4**.

Rev	Description	By	Date

Consultant

ARUP

Agreement No. NTE/10/2015
Landscape Assessment for Potential Housing Sites in the vicinity of Tseung Kwan O Feasibility Study

Drawing title

Proposed mitigation measures – conceptual layout plan of site SKI-11 - west of Yau Yue Wan Village

Drawing no.			Rev.
FIGURE 7.1.7			-
Drawn: KW	Date: 04/16	Checked: EL	Approved: EL
Scale: 1 : 1000 @ A1		Status	

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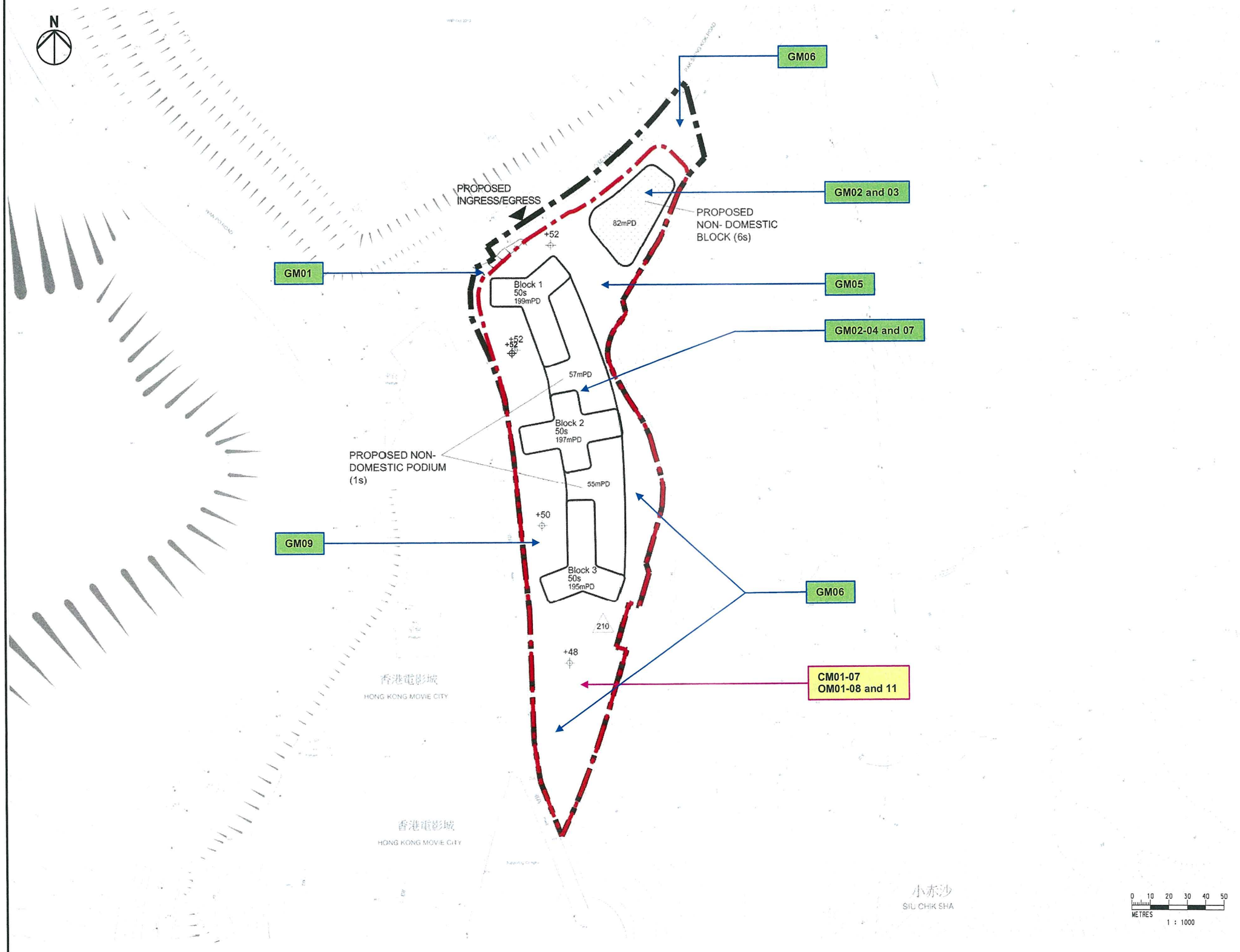

Indicative Boundary of Housing Site

Proposed Public Housing Site Area (subject to detail design)

NOTE: Proposed Mitigation Measures is listed on **Figure 7.1.1.** The conceptual layout plan and slope profile will be subjected to design and change at the next stage. Greening measures of visual illustration also provided in **Appendix C1, C2, C3 and C4**.

Rev	Description	By	Date

Consultant

ARUP

Agreement No. NTE/10/2015
Landscape Assessment for Potential Housing Sites in the vicinity of Tseung Kwan O Feasibility Study

Drawing title

Proposed mitigation measures – conceptual layout plan of site SKI-12 - east of Movie City

Drawing no.			Rev.
FIGURE 7.1.8			-
Drawn: KW	Date: 04/16	Checked: EL	Approved: EL
Scale: 1 : 1000 @ A1		Status	

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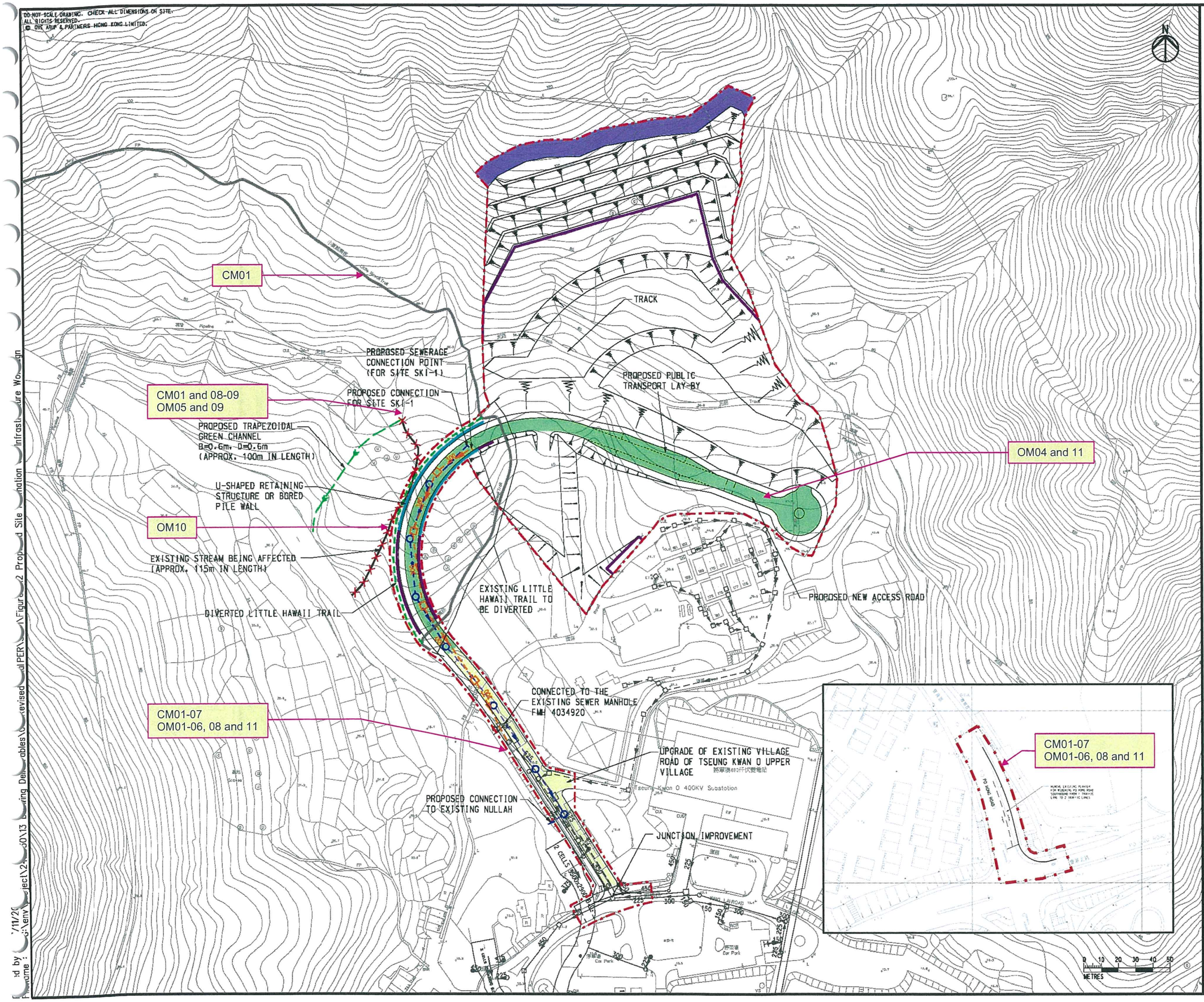
** the proposed greenery measures are indicative and subject to detail design.*



LEGEND

- STUDY AREA
- EXISTING SEWER & MANHOLE
- EXISTING STORMWATER DRAIN & MANHOLE
- PROPOSED SEWER & MANHOLE
- PROPOSED STORMWATER DRAIN & MANHOLE
- PROPOSED GREEN CHANNEL
- EXISTING STREAM TO BE AFFECTED
- PROPOSED L-SHAPED RC RETAINING WALL OR CANTILEVER SOLDIER PILE WALL
- PROPOSED BORED PILE WALL
- AREA FOR NTHS MEASURE
- EXISTING ROAD
- NEW ACCESS ROAD

NOTE: Proposed Mitigation Measures is listed on Figure 7.1.1. The layout plan and slope profile will be subjected to design at the next stage. Greening measures of visual illustration also provided in Appendix C1, C2 and C3.

Rev	Description	By	Date

Consultant

ARUP

Agreement No. NTE/10/2015
Landscape Assessment for Potential Housing Sites in the vicinity of Tseung Kwan O Feasibility Study

Drawing title

Proposed mitigation measures – site formation and infrastructure work at site SKI-1

Drawing no. FIGURE 7.1.10 Rev.

Drawn	Date	Checked	Approved
DK	08/16	KW	EL

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CM01-07
OM01-03 and 05-08

CM08-09
OM09

PROPOSED TRAPEZOIDAL GREEN CHANNEL B=1.2m, H=1.2m (APPROX. 280m IN LENGTH)

OM09-10

EXISTING STREAM BEING AFFECTED (APPROX. 360m IN LENGTH)

EXISTING 1500mm STORMWATER DRAIN TO BE ABANDONED

PROPOSED SEWERAGE CONNECTION POINT (FOR SITE SKI-2)

PROPOSED CONNECTION FOR SITE SKI-2

PROPOSED PUBLIC TRANSPORT LAY-BY

PROPOSED LIFT / STAIRCASE TOWER

PROPOSED FOOTBRIDGE

CLEAR WATER BAY FILM STUDIO

CM01-07
OM01-06 and 08-11

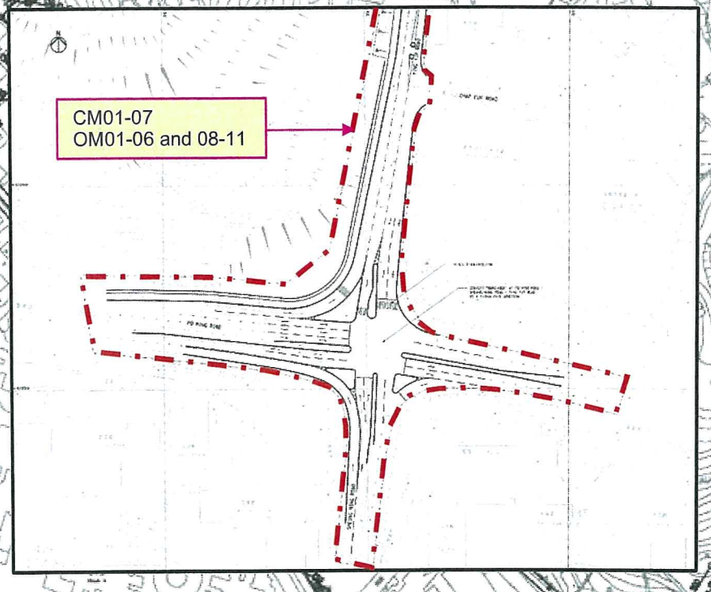
UPGRADING OF EXISTING YING YIP ROAD

YING YIP ROAD

HANG HAU VILLAGE

CONNECTED TO THE EXISTING SEWER MANHOLE FMH 4035147

EXISTING 300mm SEWERAGE UPGRADED TO BE 450mm



0 15 30 45 60 75
METRES

LEGEND

- STUDY AREA
- EXISTING SEWER & MANHOLE
- EXISTING STORMWATER DRAIN & MANHOLE
- PROPOSED/UPGRADED SEWER & MANHOLE
- PROPOSED STORMWATER DRAIN & MANHOLE
- PROPOSED GREEN CHANNEL
- EXISTING STREAM TO BE AFFECTED
- PROPOSED L-SHAPED RC RETAINING WALL OR CANTILEVER SOLDIER PILE WALL
- AREA FOR NTHS MEASURE
- EXISTING ROAD

NOTE: Proposed Mitigation Measures is listed on Figure 7.1.1. The layout plan and slope profile will be subjected to design at the next stage. Greening measures of visual illustration also provided in Appendix C1, C2 and C3.

Rev	Description	By	Date

Consultant
ARUP

Agreement No. NTE/10/2015
Landscape Assessment for Potential Housing Sites in the vicinity of Tseung Kwan O Feasibility Study

Drawing title
Proposed mitigation measures – site formation and infrastructure work at site SKI-2

Drawing no. FIGURE 7.1.11 Rev.

Drawn	Date	Checked	Approved
DK	08/16	KW	EL

Scale 1 : 1500 @ A1 Status

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Printed by : 7/11/2016
Filename : G:\env\projects\249030\13 Drawing Deliverables\05 Revised Final PFR\SKI-2\Figure 2.2 Proposed Site formation and infrastructure works.dgn

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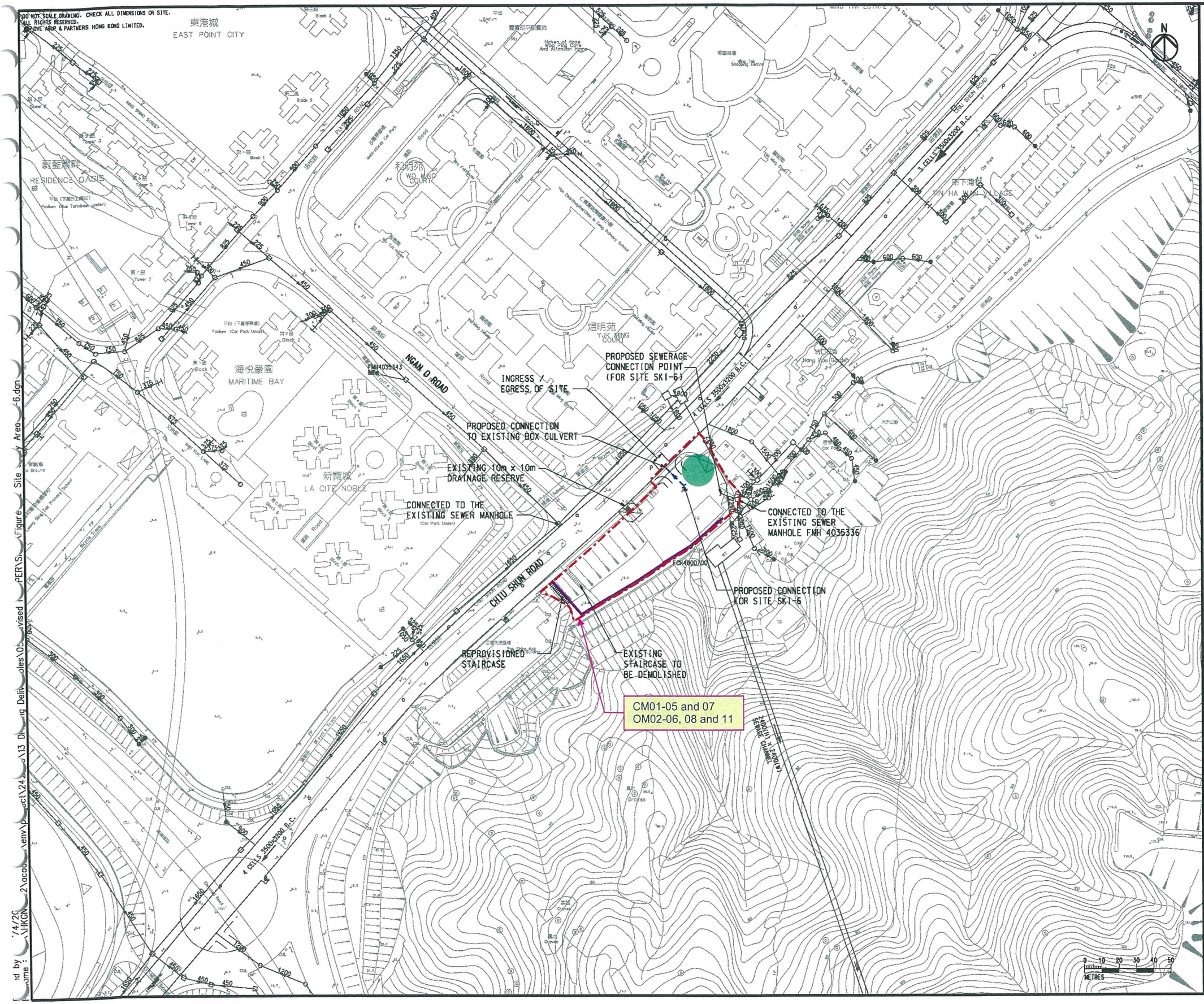

LEGEND

- STUDY AREA
- EXISTING SEWER & MANHOLE
- EXISTING STORMWATER DRAIN & MANHOLE
- PROPOSED STORMWATER DRAIN & MANHOLE
- PROPOSED L-SHAPED RC RETAINING WALL OR CANTILEVER SOLDIER PILE WALL
- PROPOSED PRESERVED IMPORTANT TREE WITH LARGE TRUNCK ≥ 1m (IT-0601 *Ficus Microcarpa*)

NOTE: Proposed Mitigation Measures is listed on Figure 7.1.1. The layout plan and slope profile will be subjected to design at the next stage. Greening measures of visual illustration also provided in Appendix C1, C2 and C3.

Rev	Description	By	Date

Consultant

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Agreement No. NTE/10/2015
Landscape Assessment for Potential Housing Sites in the vicinity of Tseung Kwan O Feasibility Study

Drawing title

Proposed mitigation measures – site formation and infrastructure work at site SKI-6

Drawing no.			Rev.
FIGURE 7.1.14			
Drawn: DK	Date: 08/16	Checked: KW	Approved: EL
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Figure 6 Site Area 6.dgn
Plotted by: \\HKGN-2\acad_env\project\247213 Drawing Deliverables\05 revised PER\Sheet\Figure 6 Site Area 6.dgn
Plotted: 7/4/2016

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CM01-05 and 07
OM01-06, 08 and 11

CM01-07
OM02-08 and 11

PROPOSED SEWER FOR SEWER DIVERSION OF HKUST SEWER TUNNEL

PROPOSED CONNECTION FOR SITE SKI-11

EXISTING HKUST SEWERAGE TUNNEL TO BE DIVERTED

BOX CULVERT

PROPOSED SEWERAGE CONNECTION POINT (FOR SITE SKI-11)

POTENTIAL LOCATION OF 130sq. m x 5m(H) UNDERGROUND STORAGE TANK

CONNECTION TO THE EXISTING SEWER MANHOLE

PROPOSED CONNECTION TO EXISTING SEWER MANHOLE

INGRESS / EGRESS OF SITE

CONNECTED TO THE EXISTING SEWER MANHOLE

PO LAM ROAD NORTH

PO LAM ESTATE

TSEUNG KWAN O FIRE SERVICES DEPARTMENT TSEUNG KWAN O RANK AND FILE MARRIED QUARTERS

TOWER 1

TOWER 2

Tseung Kwan O Playground

HAU YUE WAN VILLAGE

YAN MING COURT

KING MING COURT

Multi-storey Car Park

Yan Chung House

Yan Chak House

Basketball Court

Sports Ground

Po Lam Sports Centre

Po Lam Market

Po Lam Commercial Complex

Po Lam Primary School

Po Tak House

Po Ming House

Po Kun House

Po Ah House

Ming Chi House

Ming Tak House

Ming Leung House

Ming Yuen House

Ming On House

Ming Chi House

Podium

Car Park

Z1A4003862 @ CELLS 3500X4500 BX

N

0 10 20 30 40 50
METRES

LEGEND

- STUDY AREA
- EXISTING SEWER & MANHOLE
- EXISTING STORMWATER DRAIN & MANHOLE
- PROPOSED SEWER & MANHOLE
- PROPOSED STORMWATER DRAIN & MANHOLE
- EXISTING SEWERAGE TUNNEL AND BOX CULVERT TO BE DEMOLISHED
- AREA FOR NTHS MEASURE

NOTE: Proposed Mitigation Measures is listed on Figure 7.1.1. The layout plan and slope profile will be subjected to design at the next stage. Greening measures of visual illustration also provided in Appendix C1, C2 and C3.

Rev	Description	By	Date

Consultant

ARUP

Agreement No. NTE/10/2015
Landscape Assessment for Potential Housing Sites in the vicinity of Tseung Kwan O Feasibility Study

Drawing title

Proposed mitigation measures – site formation and infrastructure work at site SKI-11

Drawing no. FIGURE 7.1.15 Rev.

Drawn	Date	Checked	Approved
DK	08/16	KW	EL

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Printed by : 7/13/2016
Filename : G:\env\project\242030\13 Drawing Deliverables\05 Revised Final\PER\SKI-11\Figure 2.2 Proposed Site Formation and Infrastructure Works.dgn

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CONNECTED TO THE EXISTING SEWER MANHOLE PMH 4035564

INGRESS / EGRESS OF SITE

PROPOSED PUBLIC TRANSPORT LAY-BY

PROPOSED SEWERAGE CONNECTION POINT (FOR SITE SKI-12)

SKI-12

CM01-07
OM01-03 and 05-08

PROPOSED CONNECTION TO EXISTING STREAM

PROPOSED CONNECTION FOR SITE SKI-12

香港電影城
HONG KONG MOVIE CITY

小赤沙
SIU CHIK SHA

0 10 20 30 40 50
METRES

LEGEND

- STUDY AREA
- EXISTING SEWER & MANHOLE
- EXISTING STORMWATER DRAIN & MANHOLE
- PROPOSED SEWER & MANHOLE
- PROPOSED STORMWATER DRAIN & MANHOLE
- PROPOSED L-SHAPED RC RETAINING WALL OR CANTILEVER SOLDIER PILE WALL
- PROPOSED BORED PILE WALL

NOTE: Proposed Mitigation Measures is listed on Figure 7.1.1. The layout plan and slope profile will be subjected to design at the next stage. Greening measures of visual illustration also provided in Appendix C1, C2 and C3.

Rev	Description	By	Date
..			

Consultant

ARUP

Agreement No. NTE/10/2015
Landscape Assessment for Potential Housing Sites in the vicinity of Tseung Kwan O Feasibility Study

Drawing title

Proposed mitigation measures – site formation and infrastructure work at site SKI-12

Drawing no.			Rev.
FIGURE 7.1.16			
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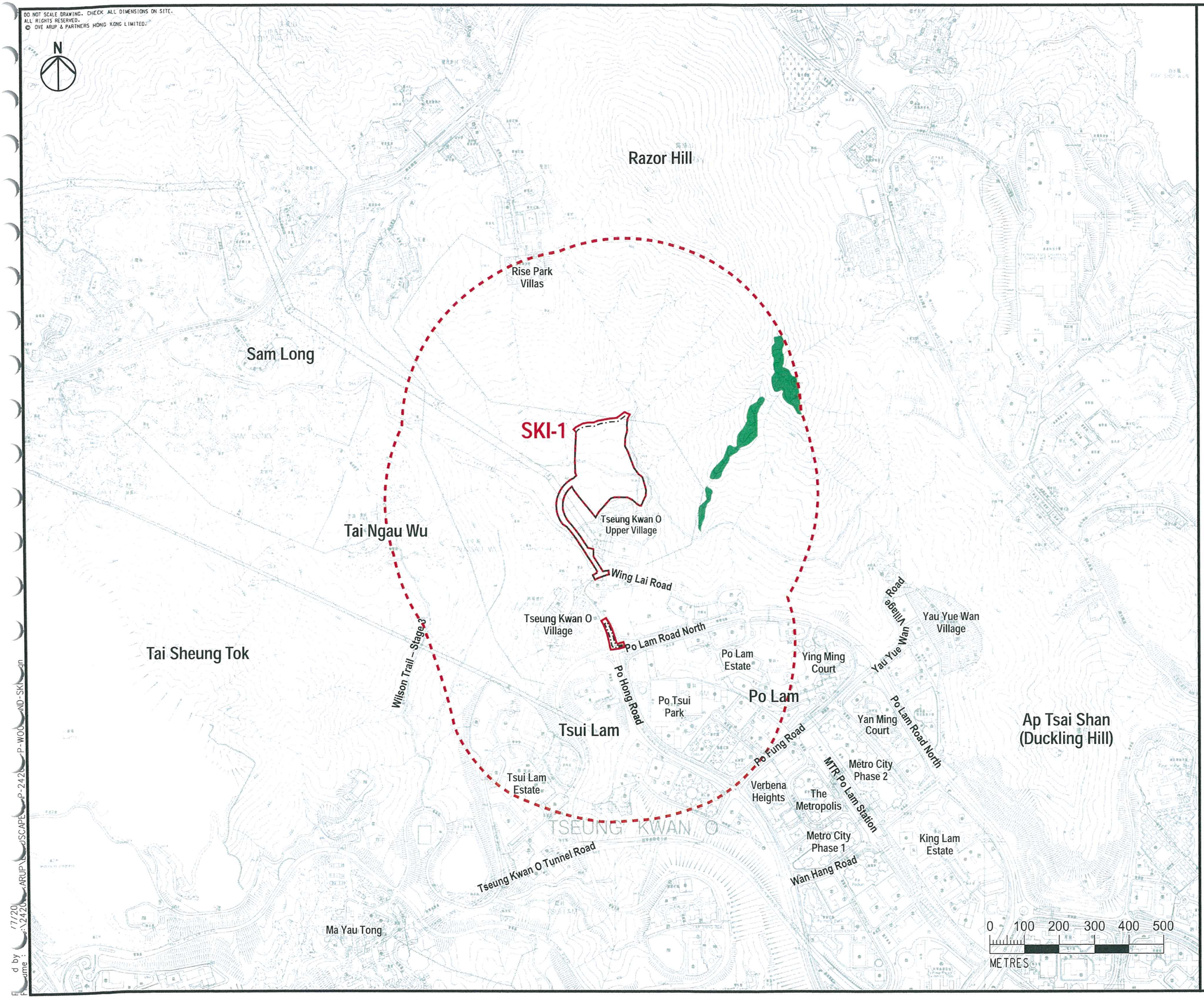
Plotted by: /12/2
Filename: G:\Env\Project\24...\01\3 Drawing Deliverables\0 Revised\PER\...12\Figure 7.2 Site Study Area_SKI-12.dwg



Legend

- 500m Assessment Area Boundary
- Site Boundary
- Affected Area Boundary
- Proposed Woodland Compensation Area (OM7)

Note:

Total approximate loss area (including other associated infrastructural works) = 2.1 ha.

Approximate compensation area = 1.9 ha.

Rev	Description	By	Date

Consultant

ARUP

Agreement No. NTE/10/2015 Landscape Assessment for Potential Housing Sites in the vicinity of Tseung Kwan O Feasibility Study

Drawing title

Potential woodland compensation area of site SKI-1

Drawing no.			Rev.
FIGURE 7.2.1			
Drawn DK	Date 08/16	Checked KW	Approved EL
Scale AS SHOWN		Status	

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N

Razor Hill

Yau Yue Wan Village Road

Yau Yue Wan Village

Clearwater Bay Road

Ap Tsai Shan (Duckling Hill)

SKI-2

Silverstrand

Silverstrand Beach

Ying Ming Court

Po Lam Road North

Po Lam

Metro City Phase 2

The Metropolis

MTR Po Lam Station

KWAN O

Metro City Phase 1

King Lam Estate

Hang Hau Village Resite

Hang Hau

Fu Ning Garden

Hau Tak Estate

Yu Ming Court

Po Ning Road

Tseung Kwan O Hospital

Tseung Kwan O Swimming Pool

East Point City

Ming Tak Estate

MTR Hang Hau Station

Yuk Ming Court

Chiu Shun Road

Hong Kong Velodrome Park

Nan Fung Plaza

La Cite Noble

Hang Hau Man Kuk Lane Park

Kwong Ming Court

Tseung Kwan O Sports Ground

Sheung Tak Estate

Beverly Garden

0 100 200 300 400 500

METRES

Legend

- 500m Assessment Area Boundary
- Site Boundary
- Affected Area Boundary
- Proposed Woodland Compensation Area (OM7)

Note:

Total loss area (including other associated infrastructural works) = 1.7 ha.

Compensation area = 1.96 ha.

Rev	Description	By	Date

Consultant

ARUP

Agreement No. NTE/10/2015
Landscape Assessment for Potential Housing Sites in the vicinity of Tseung Kwan O Feasibility Study

Drawing title

Potential woodland compensation area of site SKI-2

Drawing no. FIGURE 7.2.2 Rev.

Drawn	Date	Checked	Approved
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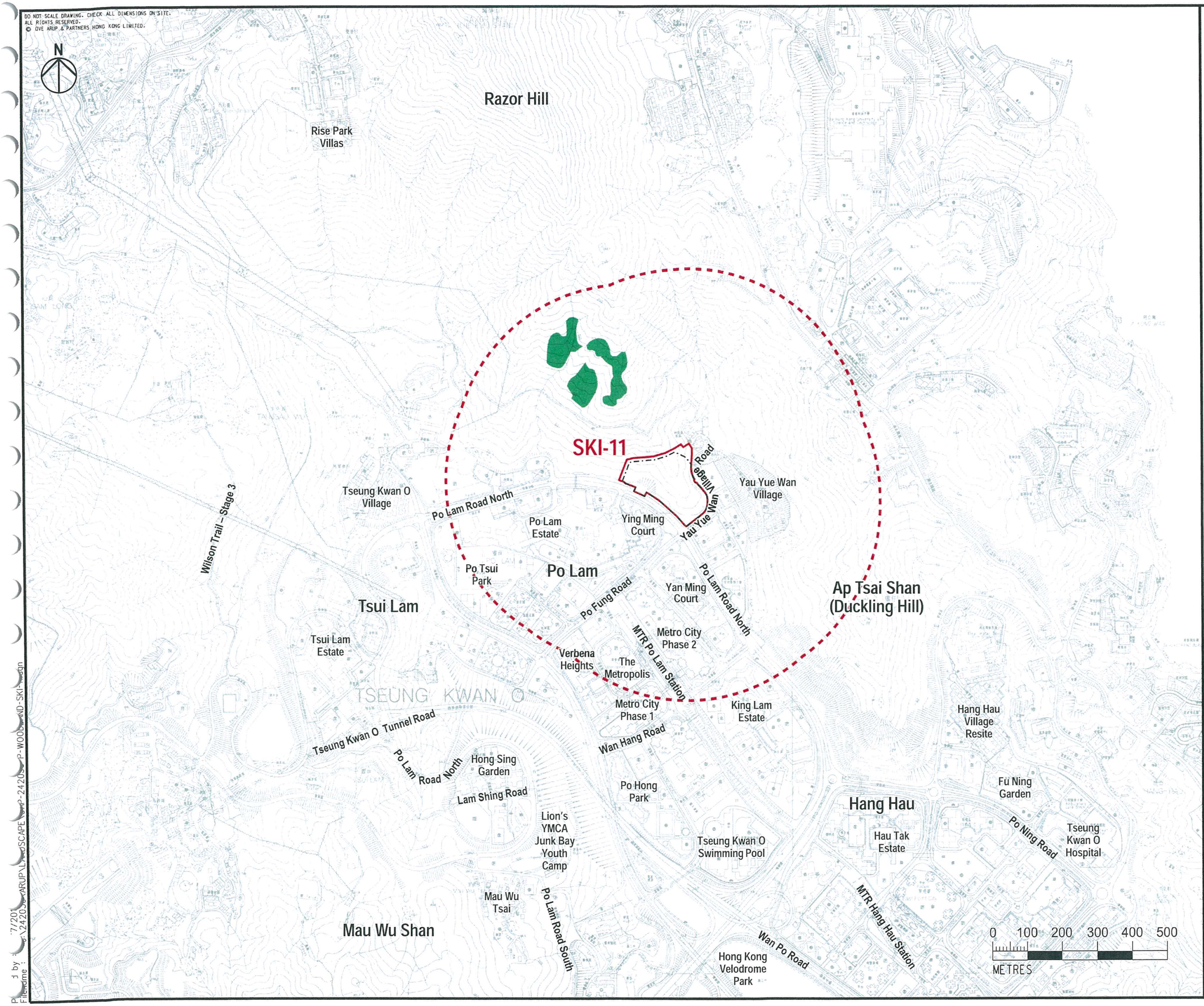

Legend

- 500m Assessment Area Boundary
- Site Boundary
- Affected Area Boundary
- Proposed Woodland Compensation Area (OM7)

Note:

Total loss area (including other associated infrastructural works) = 2.2 ha.

Compensation area = 2.43 ha.

Rev	Description	By	Date

Consultant

ARUP

Agreement No. NTE/10/2015
Landscape Assessment for Potential Housing Sites in the vicinity of Tseung Kwan O Feasibility Study

Drawing title

Potential woodland compensation area of site SKI-11

Drawing no. FIGURE 7.2.5 | Rev.

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DK	08/16	KW	EL

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N

Hang Hau

Kwong Ming Court

Sheung Tak Estate

Tseung Kwan O Town Centre

Beverly Garden

Pak Shing Kok

Wan Po Road

Tseung Kwan O Plaza

Tong Ming Court

The Wings

MTR Tseung Kwan O Station

Park Central

Bauhinia Garden

SKI-12

Hong Kong Movie City

Siu Chik Sha

Wan Po Road

MTR Lohas Park Station

The Beaumount

Lohas Park Phase 1

Lohas Park Phase 2

Junk Bay

0 100 200 300 400 500
METRES

Legend

- 500m Assessment Area Boundary
- Site Boundary
- Affected Area Boundary
- Proposed Woodland Compensation Area (OM7)

Note:

Total approximate loss area (including other associated infrastructural works) = 1.8 ha.

Compensation area = 1.8 ha.

Rev	Description	By	Date

Consultant

ARUP

Agreement No. NTE/10/2015
Landscape Assessment for Potential Housing Sites in the vicinity of Tseung Kwan O Feasibility Study

Drawing title

Potential woodland compensation area of site SKI-12

Drawing no.			Rev.
FIGURE 7.2.6			-
Drawn: DK	Date: 08/16	Checked: KW	Approved: EL
Scale: AS SHOWN		Status	

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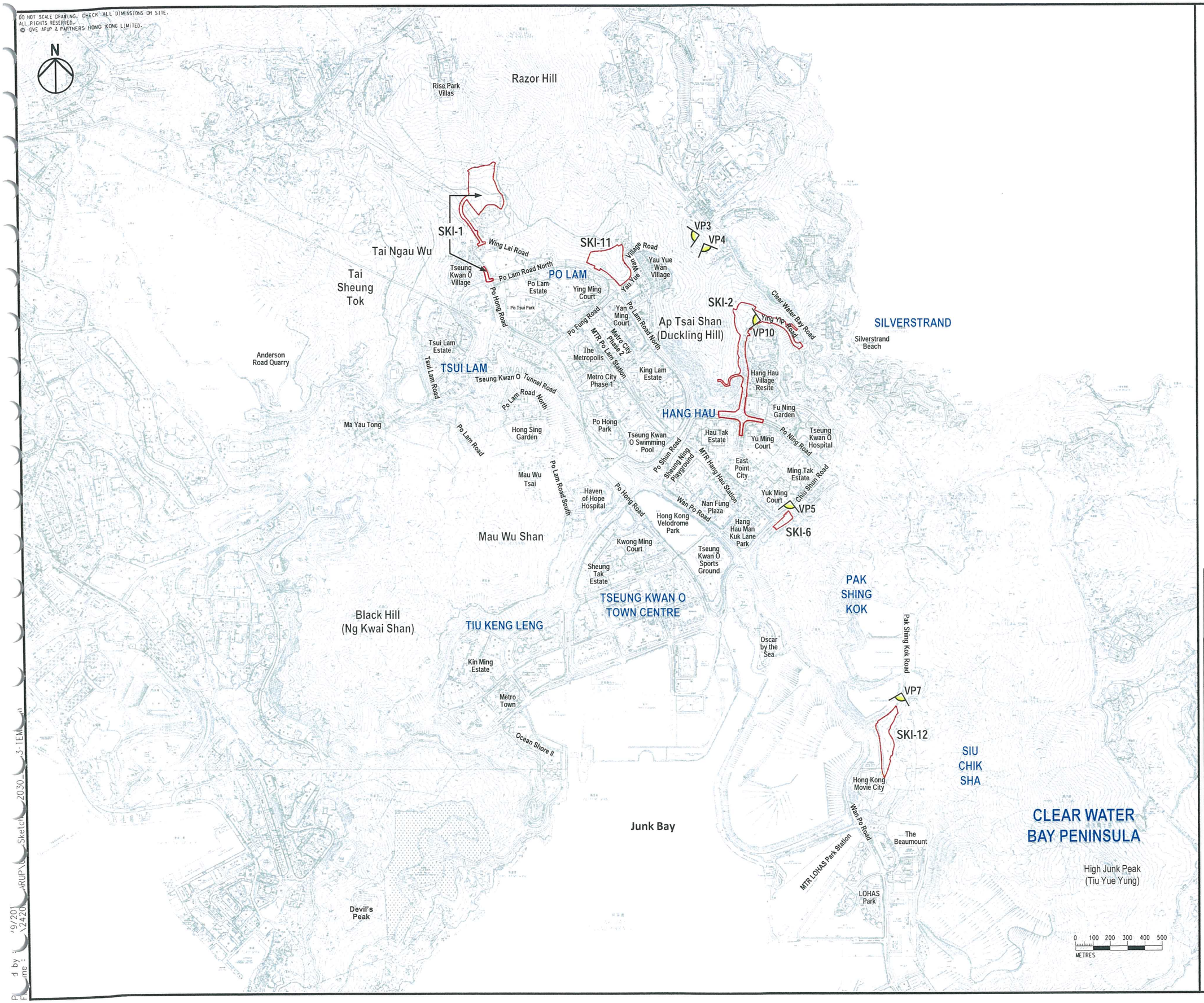

Legend

Study Area

View Point (VP)

Rev	Description	By	Date

Consultant

ARUP

Agreement No. NTE/10/2015
Landscape Assessment for Potential Housing Sites in the vicinity of Tseung Kwan O Feasibility Study

Drawing title

Photomontage view point location plan

Drawing no. FIGURE 7.3.1 Rev. -

Drawn	Date	Checked	Approved
DK	08/16	KW	EL

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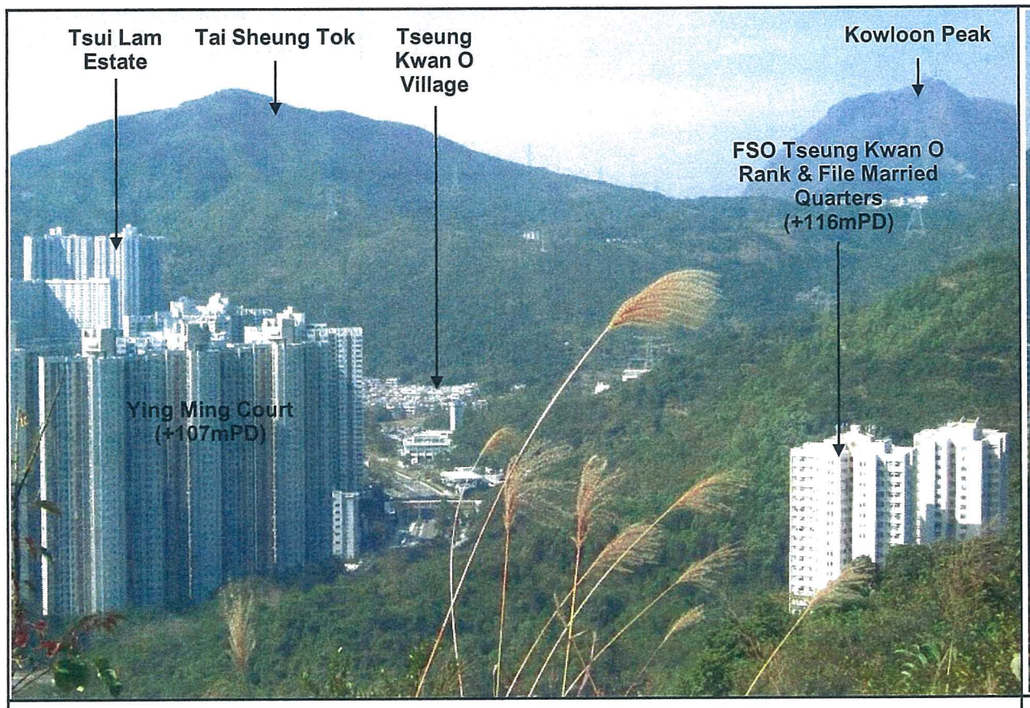
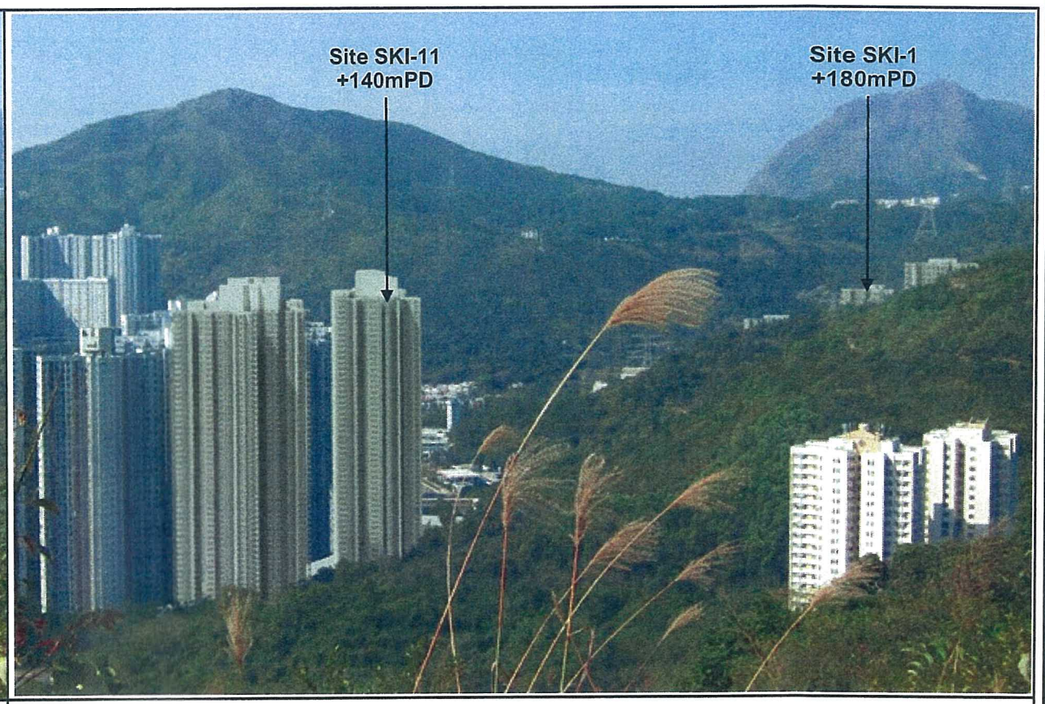
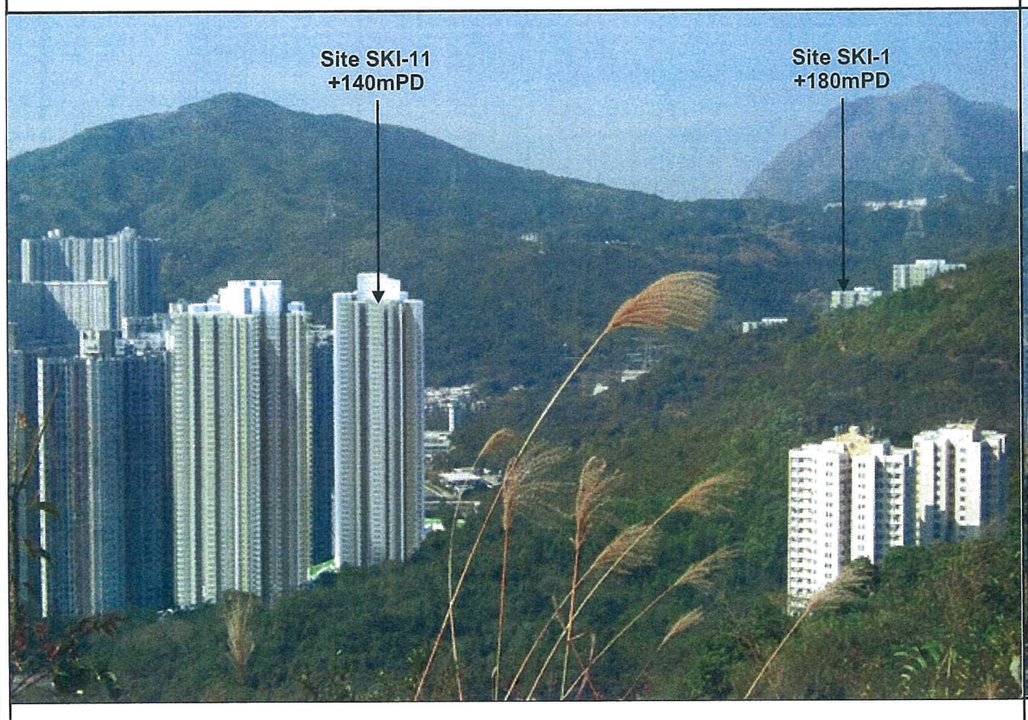


Existing View from VP3 - Ap Tsai Shan (facing northwest)



Day 1 without Mitigation Measures



Day 1 with Mitigation Measures



Year 10 with Mitigation Measures

Rev	Description	By	Date

Consultant

ARUP

Agreement No. NTE/10/2015
Landscape Assessment for Potential Housing Sites in the vicinity of Tseung Kwan O Feasibility Study

Drawing title

Photomontage from VP3

Drawing no. FIGURE 7.3.3 Rev. -

Drawn	Date	Checked	Approved
DK	08/16	KW	EL

Scale -

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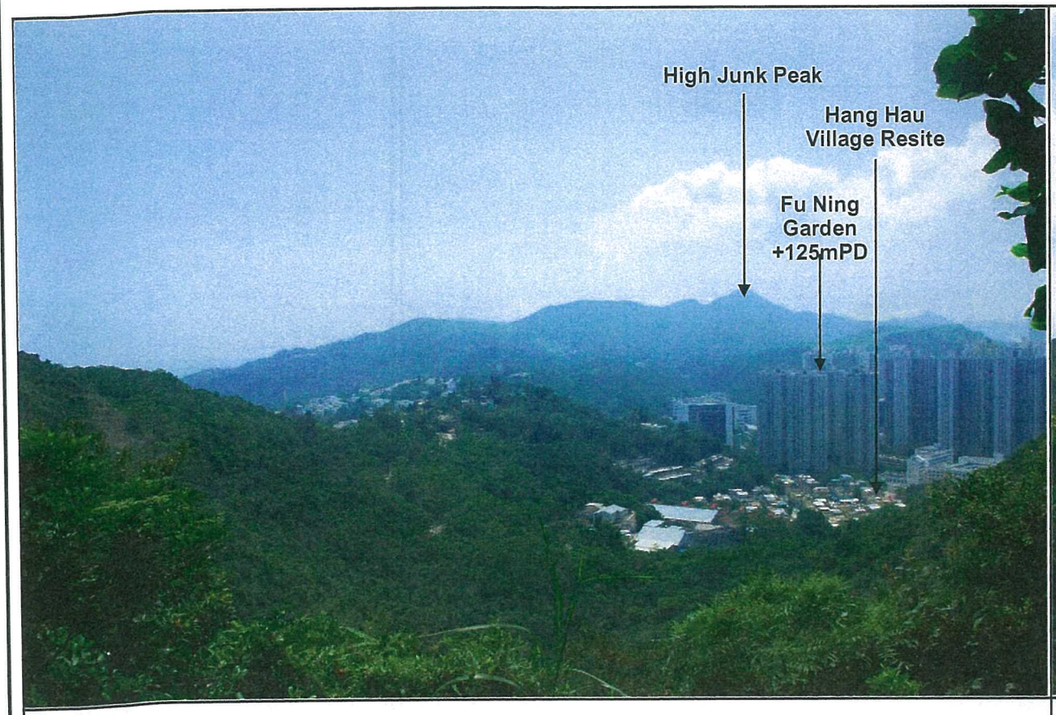
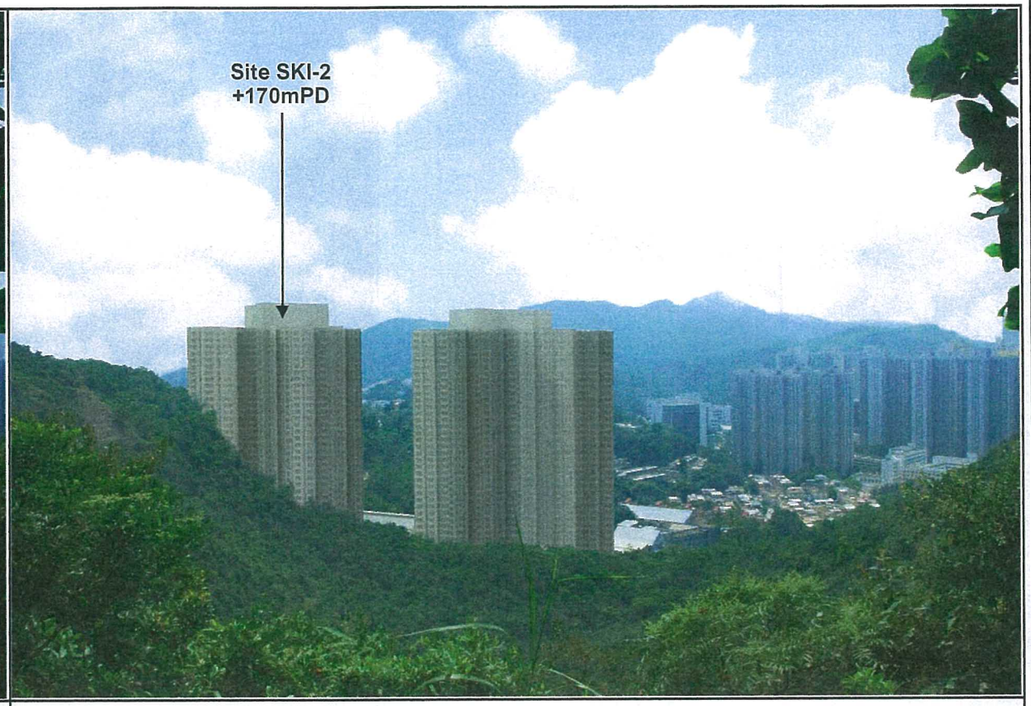
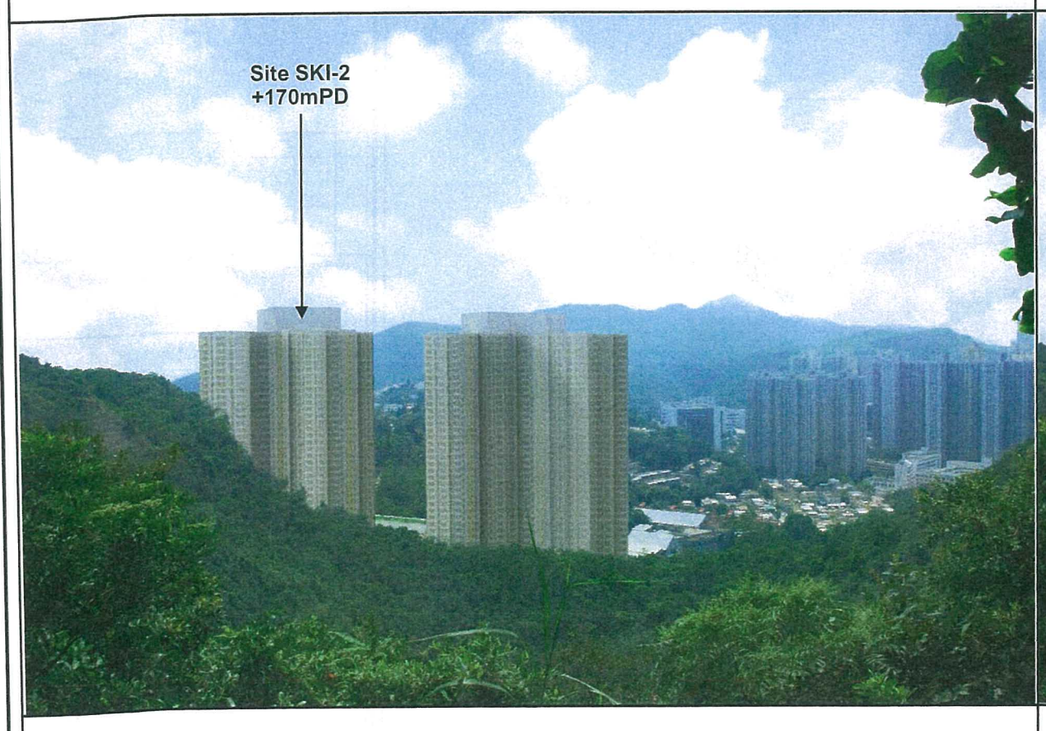


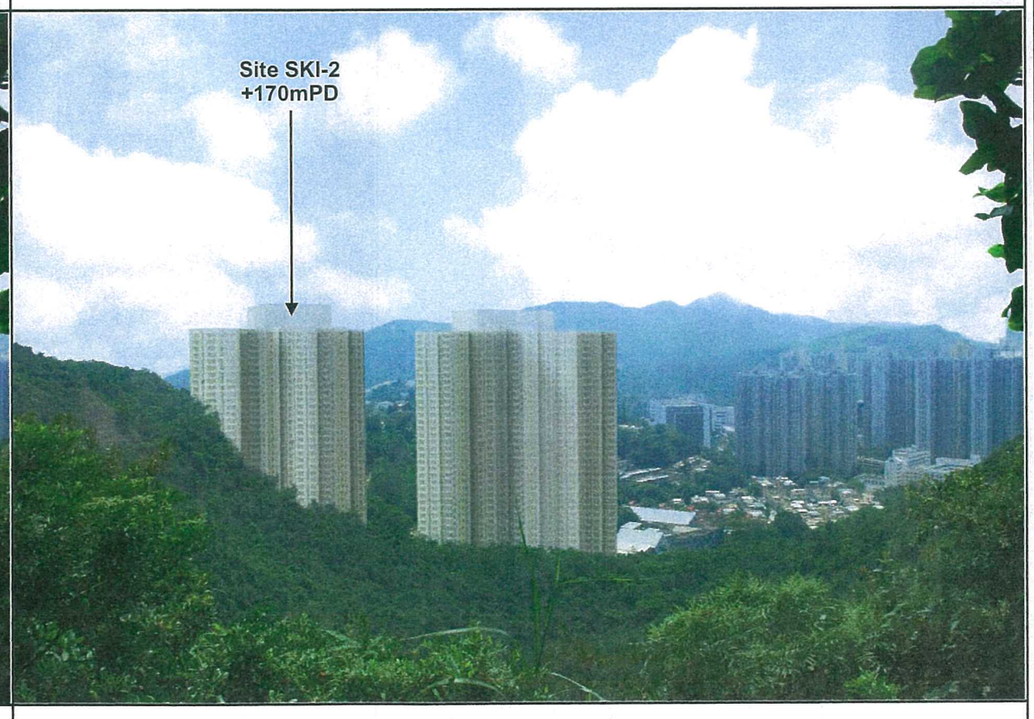
Existing View from VP4 - Ap Tsai Shan (facing south)



Day 1 without Mitigation Measures



Day 1 with Mitigation Measures



Year 10 with Mitigation Measures

Rev	Description	By	Date

Consultant

ARUP

Agreement No. NTE/10/2015
Landscape Assessment for Potential Housing Sites in the vicinity of Tseung Kwan O Feasibility Study

Drawing title

Photomontage from VP4

Drawing no.			Rev.
FIGURE 7.3.4			-
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Existing View from VP5 - Roadside of Chiu Shun Road



Day 1 without Mitigation Measures



Day 1 with Mitigation Measures



Year 10 with Mitigation Measures

Rev	Description	By	Date

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Feasibility Study

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Drawing no. FIGURE 7.3.5 | Rev. -

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DK	08/16	KW	EL

Scale -

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Existing View from VP7 - Pak Shing Kok Road



Day 1 without Mitigation Measures



Day 1 with Mitigation Measures



Year 10 with Mitigation Measures

Rev	Description	By	Date

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Appendix A

Tree Survey Plan with Landscape Baseline

LR1.4 Shrubland

This LR refers to the shrubland on the upland hillside which extends continuously through the hilltop of Razor Hill. This hillside shrubland is behind the woodland occurring at a lower altitude. The shrubland within the assessment area is approximately 2,300 nos. of trees and 45.4 ha. This LR is dominated by common species including shrubs *Rhaphiolepis indica, Rhodomyrtus tomentosa, Breynia fruticosa* and *Garcinia oblongifolia*, and herb *Scleria ciliaris, Dicranopteris pedata* and *Miscanthus floridulus*, with individuals of young to middle-aged exotic plantation trees *Acacia confusa* and *Acacia mangium* scattered on the hillside. Some rare and precious plant species including shrubs and seedlings of trees are identified in this LR which are recorded in **LR1.9 Important Trees & Rare and Precious Species**.
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The shrubland is local significant. The landscape amenity and quality are moderate with reasonable tolerance to change. Those vegetation are generally in mature and fair health condition. Therefore, the overall sensitivity of this LR is considered as **medium**.

LR1.3 Plantation

Plantation on hillside including Razor Hill which is approximately 5,500 nos. of trees and 4.61 ha within the assessment area. The northern half of the Site SKI-1 is covered by this LR which is extensive plantation stand and extends further to the northern hillside ridge. This LR is low in both floral diversity and structural complexity. This LR is dominated by common exotic plantation trees including *Acacia mangium, Acacia auriculiformis, Acacia confusa, Lophostemon confertus, Eucalyptus citriodora* as well as some lower diversity of naturally developed native tree species including *Machilus pauhoi, Machilus chekiangensis* and *Schefflera heptaphylla*. Those vegetation are generally in fair health condition . Some rare and precious plant species including seedlings, undersized trees (i.e. DBH < 95mm) and trees (i.e. DBH ≥ 95mm) are identified in this LR which are recorded in **LR1.9 Important Trees & Rare and Precious Species**.
The plantation is local significant. Those plantation trees are dense, providing a relatively moderate landscape amenity value and quality. This LR is a man-made resource and is able to be recreated reasonably easily. Base on it has a reasonable capacity to accommodate change, the sensitivity of this LR is considered as **medium**.

LR1.1 Woodland

The woodland located on natural hillside includes Razor Hill and Tai Ngau Wu, which is approximately 43,550 nos. of trees and 60.84 ha within the 500 m assessment area of Site SKI-1. This LR covers a part of Little Hawaii Trail on Razor Hill. This woodland located on the southern half of the Site SKI-1 and immediately to the north of Tseung Kwan O Village is mixed with lower density of younger plantation trees. The overstorey of this LR is dominated by younger plantation tree including *Acacia auriculiformis* and *Acacia mangium* as well as young to middle-aged native tree species including *Machilus pauhoi, Mallotus paniculatus* and *Schefflera heptaphylla*. This LR extends into the assessment area and shares similar floristic structure and composition to those within the affected site area at SKI-1 which is dominated by native woodland common species including tree *Aporusa dioica, Machilus chekiangensis, Macaranga tanarius* var. *tomentosa, Mallotus paniculatus, Schefflera heptaphylla* and *Sterculia lanceolata* in the overstorey. The understory is dominated by shrub *Alangium chinense, Diplospora dubia, Embelia laeta, Litsea rotundifolia* var. *oblongifolia, Microcos nervosa* as well as herb *Lophatherum gracile, Cyclosorus parasiticus* and *Lygodium japonicum*. Those vegetation are generally in fair health condition . Some rare and precious plant species including shrubs, climbers and seedlings of trees are identified in this LR which are recorded in **LR1.9 Important Trees & Rare and Precious Species**.
The woodland is local significant. Those woodland trees have a low suitability of transplanting. The quality and significant of this LR are high with relatedly little tolerance to change. The sensitivity of this LR is considered to be high.

LR1.2 Shrubland / Grassland

This LR refers to the shrubland / grassland on the upland hillside which extends continuously through the hilltop of Tai Ngau Wu. This LR within the assessment area is approximately 190 nos. of trees and 7.13 ha. This LR is generally surrounded by woodland, which occurs at a lower altitude . This LR is dominated by common shrub including *Rhodomyrtus tomentosa, Eurya nitida, Embelia laeta, Rhaphiolepis indica* and *Melastoma sanguineum* as well as herb *Dicranopteris pedata, Miscanthus floridulus, Lygodium japonicum and Ischaemum barbatum*. A few of tree species including *Schefflera heptaphylla, Cratoxylum cochinchinense* and *Aporusa dioica* are found in this LR.
The shrubland / grassland is local significant. The landscape amenity and quality are moderate with reasonable tolerance to change. Those vegetation are generally in middle-aged and fair health condition. Therefore, the overall sensitivity of this LR is considered as **medium**.

LR1.5 Roadside Planting

The existing middle-aged roadside and buffer plantings along Po Lam Road North and Po Hong Road which provide good screening effect and enhance the overall landscape quality of the surrounding environment . This LR within the assessment area is approximately 230 nos. of trees and 1.32 ha. These plantings are mainly common roadside amenity trees and shrubs to screen road alignment and associated structures along linear road network.
These roadside plantings are local significant and provide moderate amenity value to the existing environment. The landscape quality is moderate with reasonable tolerance to change. Therefore, the sensitivity of this LR is considered as **medium**..

LR1.6 Open Space

This LR is an open space at Po Tsui Park. This is the first park in Tseung Kwan O which is approximately 4.2 ha. This LR located 250 m to the south of Site SKI-1 is approximately 400 nos. of trees and 3.8 ha within the assessment area. This park located near Po Lam Estate . There are various kinds of landscape amenity tree plantings and a wide range of leisure facilities including artificial grass pitch for soccer and hockey activities, 7-a-side hard-surface mini-soccer-cum-handball pitch, tennis courts, tennis practice courts, children's play area, sitting-out area, jogging trail with fitness stations, etc.
The open space is regional significant. This LR has a relatively high amenity value. Those vegetation are generally common species in middle-aged and fair health condition. The landscape quality is moderate with reasonable tolerance to change due to the man-made resource of this LR. Therefore, the sensitivity of this LR is considered as **high**..

Legend

- 500m Assessment Area Boundary
- Site Boundary
- Affected Area Boundary

NOTE: This is a broad brush tree group survey within 500m Assessment Area of **Site SKI-1**. The numbers of trees are approximately number only. The location of baseline landscape resources are mapped in **Figure 5.1.1** and landscape resources photos are recorded in **Figure 5.2.1**.

Rev	Description	By	Date

Consultant

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Landscape Assessment for Potential Housing Sites in the vicinity of Tseung Kwan O Feasibility Study

Drawing title

Tree survey plan with landscape baseline (sheet 1 of 5) – site SKI-1

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Appendix A			-
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LR2.3 Plantation

Plantation on lowland hillside of Ap Tsai Shan which is approximately 5,900 nos. of trees and 14.96 ha within the assessment area. The plantation located within the eastern part of the Site SKI-2 is composed of various species including exotic planted tree *Acacia confusa* and self-seeded *Melia azedarach*, and ornamental shrub *Calliandra haematocephala*. The understory of the plantation is found with common herb *Dicranopteris pedata, Microstegium ciliatum* and *Cyclosorus interruptus* and young, self-seeded seedlings of woody plant such as *Bridelia tomentosa*. The plantation located on the southwestern part of the assessment area which are man-made slopes adjoining Po Lam Road North, Po Ning Road and Ying Yip Road and covered in plantation woodland with dominant species including tree *Eucalyptus citriodora, Acacia confusa, Leucaena leucocephala, Casuarina equisetifolia* and *Bambusa* sp. A small part of those plantation located on man-made slope within the southern part of Site SKI-2 along Ying Yip Road. Smaller patches of plantations located alongside Hang Hau Village and Shui Bin Tsuen. The species dominated in these small plantation stands include exotic planted tree *Acacia confusa*, *Eucalyptus citriodora, Pinus elliottii* and *Casuarina equisetifolia*. Some rare and precious plant species including seedlings, undersized trees (i.e. DBH < 95mm), trees (i.e. DBH ≥ 95mm), climber and shrub are identified in this LR which are recorded in **LR2.9 Important Trees & Rare and Precious Species**. Those plantation trees are generally planted on man-made slope in fair health condition in this LR .

The plantation is local significant. Those plantation trees are dense and mature, providing a relatively low landscape amenity value and landscape quality is moderate. This LR is a man-made resource and is able to be recreated reasonably easily. Base on it has a reasonable capacity to accommodate change, the sensitivity of this LR is considered as **medium**.

LR2.4 Shrubland

This LR refers to the shrubland on the hilltop of Ap Tsai Shan which are some small patches of shrubland located on the western part of the assessment area. This LR is approximately 190 nos. of trees and 3.8 ha within the assessment area. These hillside shrubland patches are surrounded by **LR2.1 Woodland** as well as **LR2.3 Plantation** that occur at a lower altitude. The dominated species include shrub *Rhodomyrtus tomentosa, Eurya nitida, Rhaphiolepis indica, Embelia laeta* and herb *Dicranopteris pedata* and *Scleria ciliaris*. Some rare and precious plant species including shrubs and woody climbers are identified in this LR which are recorded in **LR2.9 Important Trees & Rare and Precious Species**. Those shrub and plantation trees are generally in fair health condition in this LR . The shrubland is local significant. The landscape amenity and quality are moderate with reasonable tolerance to change. Those vegetation are generally in mature and fair health condition. Therefore, the overall sensitivity of this LR is considered as **medium**.

LR2.1 Woodland

The woodland located on natural hillside of Ap Tsai Shan, which is approximately 31,900 nos. of trees and 64.18 ha within the 500 m the assessment area. Some smaller fragmented patches of woodland are present in between the low density residential villas located on the eastern part of the assessment area. The vegetation of this woodland within the assessment area shares similar floristic composition as those within the Site SKI-2 . The woodland within the Site SKI-2 is dominated tree including *Aporusa dioica, Schefflera heptaphylla, Alangium chinense, Machilus chekiangensis, Mallotus paniculatus* in the overstory. The understory is dominated by shrub including *Psychotria asiatica* and *Litsea rotundifolia* var. *oblongifolia*, and herb *Alocasia macrorrhizos* and *Microstegium ciliatum*. Some rare and precious plant species including shrubs, climbers and seedlings of trees are identified in this LR which are recorded in **LR2.9 Important Trees & Rare and Precious Species**. Those vegetation are generally in fair health condition. The sensitivity of this LR is considered as **High**. .

LR2.6a Open Space at Sheung Ning Playground

This playground located at Po Shun Road and Wan Po Road and adjacent to various public open space and recreational facilities includes Tseung Kwan O Swimming Pool and Tseung Kwan O Sports Ground. This open space at Sheung Ning Playground is approximately 2.5 ha. This LR located 300 m to the southwest of Site SKI-2 is approximately 400 nos. of trees and 2.1ha within the assessment area. It provides a large lawn, fitness facilities, 500 m jogging track under flowering trees, three basketball courts, an inclusive children's playground, some walking pebble trails, Tai Chi fitness garden, a herb garden and a community garden . A part of elevated flyover covers located within Sheung Ning Playground is designed as noise barriers with facade greening. Therefore, the flyover blends with the park facilities and landscaped gardens. An approximately 0.051 ha community garden is under the LCSD's "Community Garden Programme" with the guidance of the instructors, participants can learn how to grow ornamental plants, fruits and vegetables in this garden with harvesting.

The open space is regional significant. This LR has a relatively high amenity value. Those vegetation are generally common species in middle-aged and fair health condition. The landscape quality is moderate with reasonable tolerance to change due to the man-made resource of this LR. Therefore, the sensitivity of this LR is considered as **high**.

LR2.5 Roadside Planting

The existing middle-aged roadside and buffer plantings along Po Lam Road North, Po Shun Road, Sheung Ning Road and Po Ning Road which provide good screening effect and enhance the overall landscape quality of the surrounding environment . This LR within the assessment area is approximately 900 nos. of trees and 4.84 ha. These plantings are mainly common roadside amenity trees and shrubs to screen road alignment and associated structures along linear road network. The part of roadside planting are amenity shrub located within the Site SKI-2 at the roundabout of the Ying Yip Road and Po Ning Road.

These roadside plantings are local significant and provide moderate amenity value to the existing environment. The landscape quality is moderate with reasonable tolerance to change. Therefore, the sensitivity of this LR is considered as **medium**.

LR2.6b Open Space at Pui Shing Garden

Pui Shing Garden located adjacent to Sai Kung Tseung Kwan O Government Complex is a public rest garden and open plaza . This LR located 300 m to the southeast of Site SKI-2 is approximately 80 nos. of trees and 0.5 ha within the assessment area. This garden design is blended with the government complex which provides a public front yard garden. Some fitness facilities and sitting-out areas are also provided with vegetative green buffer of Pui Shing Road and Pui Shing Lane.

The open space is local significant. This LR has a relatively high amenity value. Those vegetation are generally common species in middle-aged and fair health condition. The landscape quality is moderate with reasonable tolerance to change due to the man-made resource of this LR. Therefore, the sensitivity of this LR is considered as **high**.

Legend

- 500m Assessment Area Boundary
- Site Boundary
- Affected Area Boundary

NOTE: This is a broad brush tree group survey within 500m Assessment Area of **Site SKI-2**. The numbers of trees are approximately number only. The location of baseline landscape resources are mapped in **Figure 5.1.2** and landscape resources photos are recorded in **Figure 5.2.2**.

Rev	Description	By	Date

Consultant

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Landscape Assessment for Potential Housing Sites in the vicinity of Tseung Kwan O Feasibility Study

Drawing title

Tree survey plan with landscape baseline (sheet 2 of 5) – site SKI-2

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LR6.5 Roadside Planting
The existing middle-aged roadside and buffer plantings along Chiu Shun Road, Ngan O Road, Wan Po Road, Sheung Ning Road and Po Ning Road which provide good screening effect and enhance the overall landscape quality of the surrounding environment . This LR within the assessment area is approximately 980 nos. of trees and 3.9 ha. These plantings are mainly common roadside amenity trees and shrubs to screen road alignment and associated structures along linear road network. Those vegetation are generally in fair health condition. These roadside plantings are local significant and provide moderate amenity value to the existing environment. The landscape quality is moderate with reasonable tolerance to change. Therefore, the sensitivity of this LR is considered as **medium**.

LR6.6d Open Space at Tseung Kwan O Sports Ground
This LR is a multi-purpose sports ground for track and field events which is approximately 5.9 ha. This LR located 300 m to the west of the Site SKI-6 is approximately 240 nos. of trees and 4.8 ha within the assessment area. It is comprised of a main sports ground, a warm-up secondary sports ground, and other facilities for holding large-scale international competitions including 2009 Hong Kong Games, 2009 East Asian Games and 2011 Hong Kong Games. Its track and field facilities conform to the standard of International Association of Athletics Federations.
The open space is global significant. This LR has a relatively high amenity value. Those vegetation are generally common species in middle-aged and fair health condition. The landscape quality is moderate with reasonable tolerance to change due to the man-made resource of this LR. Therefore, the sensitivity of this LR is considered as **high**.

LR6.6a Open Space at Pui Shing Garden
Pui Shing Garden is a public rest garden and open plaza which located adjacent to Sai Kung Tseung Kwan O Government Complex . This LR located 250 m to the north of the Site SKI-6 is approximately 80 nos. of trees and 0.5 ha within the assessment area. This garden design is blended with the government complex which provides a public front yard garden. Some fitness facilities and sitting-out areas are also provided with vegetative green buffer of Pui Shing Road and Pui Shing Lane.
The open space is local significant. This LR has a relatively high amenity value. Those vegetation are generally common species in middle-aged and fair health condition. The landscape quality is moderate with reasonable tolerance to change due to the man-made resource of this LR. Therefore, the sensitivity of this LR is considered as **high**.

LR6.6b Open Space at Hang Hau Garden
Hang Hau Garden is a terrace rest garden adjacent to Tin Hau Temple at Fu Tau Chau. This LR located 80 m to the northeast of the Site SKI-6 is approximately 50 nos. of trees and 0.2 ha within the assessment area. This garden provides recreation facilities, open space and act as a front yard of Tin Hau Temple. Some passive open space including sitting areas, chess play areas, picnic areas are in shade under some mature and large trees .
The open space is local significant. This LR has a relatively high amenity value. Those vegetation are generally common species in middle-aged and fair health condition. The landscape quality is moderate with reasonable tolerance to change due to the man-made resource of this LR. Therefore, the sensitivity of this LR is considered as **high**.

LR6.2 Shrubland / Grassland
This LR refers to the shrubland / grassland on the upland hillside which extends continuously through the hilltop of Tai Ngau Wu . This LR within the assessment area is approximately 360 nos. of trees and 14.5 ha. This LR is generally surrounded by woodland. The hillside shrubland / grassland in the southern part of the assessment area is dominated by common shrub *Rhaphiolepis indica, Baeckea frutescens*, grass *Miscanthus floridulus, Neyraudia reynaudiana*, and small tree *Aporusa dioica, Rhus chinensis* and *Sapium discolor.* Scattered patches of self-seeded *Leucaena leucocephala* and *Acacia confusa* are also recorded on this grassy shrubland; both are exotic species. Those vegetation are generally in fair health condition.
The shrubland / grassland is local significant. The landscape amenity and quality are moderate with reasonable tolerance to change. Those vegetation are generally in middle-aged and fair health condition. Therefore, the overall sensitivity of this LR is considered as **medium..**

LR6.6e Open Space at Hong Kong Velodrome Park
Hong Kong Velodrome Park is a public park and open space which is approximately 5.3 ha. This LR located 400 m to the west of the Site SKI-6 is approximately 100 nos. of trees and 1.1 ha within the assessment area. It is landscaped with 1,200 nos. of trees of a wide variety. Apart from basic park facilities, it contains a skatepark, a central lawn, artificial lakes and a model boat pool. At the skatepark area, three half-pipes and bowls of varying levels of steepness of difficulty are provided for skateboarding and aggressive inline skating . The central lawn provides a large area of green open space for visitors to relax on. The artificial lakes blend in with the velodrome building with its curvilinear shape. One 40 cm deep model boat pool is provided for model boating. The park contains two sets of artistic feature seats. One set shows a pair of circular seats simulating two race bicycles. The other pair reflects the design for the organic geometry of the skatepark.
The open space is global significant. This LR has a relatively high amenity value. Those vegetation are generally common species in middle-aged and fair health condition. The landscape quality is moderate with reasonable tolerance to change due to the man-made resource of this LR. Therefore, the sensitivity of this LR is considered as **high**.

LR6.6c Open Space at Hang Hau Man Kuk Lane Park
Hang Hau Man Kuk Lane Park is a contemporary Chinese style garden at Hang Hau This LR located 150 m to the west of the Site SKI-6 is approximately 240 nos. of trees and 1.9 ha within the assessment area. The white walls and grey rooftops resemble typical Suzhou and Hangzhou landscape architecture style. A pond laid at the centre of the garden is adorned with a traditional style bamboo pavilion . Some stone bridges built across the pond act as leisure walkways. In order to enriching the traditional Chinese garden ambience, there are various traditional Chinese garden plants including *Camellia azalea* and *Hibiscus mutabilis*. The park provides outdoor artificial turf bowling green with six rinks for a maximum of eight players in a rink at any time. This park also provides Chinese garden, covered plaza and fitness corner.
The open space is regional significant. This LR has a relatively high amenity value. Those vegetation are generally common species in middle-aged and fair health condition. The landscape quality is moderate with reasonable tolerance to change due to the man-made resource of this LR. Therefore, the sensitivity of this LR is considered as **high**.

LR6.3 Plantation
Plantation on hillside including Pak Shing Kok which is approximately 4,600 nos. of trees and 9.2 ha within the assessment area. The plantation occur along roadsides and on engineered slopes . Common species present are exotic planted trees include *Acacia confusa, A. auriculiformis* and *Eucalyptus* spp. Vegetation development of the under- and middle-storeys vary in stands, with some stands mainly covered by leaf-litter and limited natural regeneration, while some have the shrub *Psychotria asiatica*, and trees *Aporusa dioica, Litsea glutinosa, Schefflera heptaphylla* and *Zanthoxylum avicennae*. The plantation located at the west of the assessment area is relatively young in age, with exotic planted trees *Acacia confusa, Eucalyptus* sp., *Casuarina equisetifolia* and self-seed *Leucaena leucocephala* dominating the whole area. Some exotic species are dominated at the Site SKI-6 including *Leucaena leucocephala, Acacia confusa, Macaranga tanarius* var. *tomentosa* and *Ficus microcarpa.* Those vegetation are generally in fair health condition. Some rare and precious plant species including seedlings, undersized trees (i.e. DBH < 95mm) and trees (i.e. DBH ≥ 95mm) are identified in this LR which are recorded in **LR6.9 Important Trees & Rare and Precious Species**.
The plantation is local significant. Those plantation trees are dense, providing a relatively moderate landscape amenity value. The landscape quality is moderate. This LR is a man-made resource and is able to be recreated reasonably easily. Base on it has a reasonable capacity to accommodate change, the sensitivity of this LR is considered as **medium**.

LR6.1 Woodland
The woodland located on natural hillside of Pak Shing Kok is approximately 8,300 nos. of trees and 16.6 ha within the 500 m assessment area of the Site SKI-6. This LR located vicinity to the south of the Site SKI-6 is dominated by some mature shrubs and trees including *Rhus chinensis, R. succedanea. Aporusa dioica, Sapium sebiferum, Alangium chinense, Machilus chekiangensis* and *Mallotus paniculatus.* The climber *Dalbergia benthamii* is throughout the canopy and scattered individuals of exotic planted tree *Acacia confusa* are also found . Those vegetation are generally in fair health condition. Some rare and precious plant species including shrubs, climbers and seedlings of trees are identified in this LR which are recorded in **LR6.9 Important Trees & Rare and Precious Species**.
The woodland is local significant. The landscape amenity and quality are moderate with reasonable intolerance to change. Those vegetation are generally in middle-aged and fair health condition. Therefore, the overall sensitivity of this LR is considered as high

Legend
- 500m Assessment Area Boundary
- Site Boundary
- Affected Area Boundary

NOTE: This is a broad brush tree group survey within 500m Assessment Area of **Site SKI-6**. The numbers of trees are approximately number only. The location of baseline landscape resources are mapped in **Figure 5.1.5** and landscape resources photos are recorded in **Figure 5.2.5**.

Rev	Description	By	Date

Consultant
ARUP

Agreement No. NTE/10/2015
Landscape Assessment for Potential Housing Sites in the vicinity of Tseung Kwan O Feasibility Study

Drawing title
Tree survey plan with landscape baseline (sheet 3 of 5) – site SKI-6

Drawing no.			Rev.
Appendix A			-
Drawn	Date	Checked	Approved
DK	08/16	KW	EL
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LR11.6b Open Space at Po Tsui Park

This is the first park in Tseung Kwan O located near Po Lam Estate which is approximately 4.2 ha. This LR located 400 m to the southwest of the Site SKI-11 is approximately 50 nos. of trees and 1.3 ha within the assessment area. There are various kinds of landscape amenity tree plantings and a wide range of leisure facilities including artificial grass pitch for soccer and hockey activities, 7-a-side hard-surface mini-soccer-cum-handball pitch, tennis courts, tennis practice courts, children's play area, sitting-out area, jogging trail with fitness stations, etc. .

The open space is regional significant. This LR has a relatively high amenity value. Those vegetation are generally common species in middle-aged and fair health condition. The landscape quality is fair with reasonable tolerance to change due to the man-made resource of this LR. Therefore, the sensitivity of this LR is considered as **high**.

LR11.4 Shrubland

This LR located on the northwest of assessment area is dominated by a continuous piece of shrubland. This LR is approximately 580 nos. of trees and 11.5 ha within the assessment area. It extends to the north outside of the assessment area and towards Razor Hill. This hillside shrubland is surrounded by woodland occurring at a similar or lower altitude. Typical species include the shrubs *Rhaphiolepis indica, Rhodomyrtus tomentosa, Breynia fruticosa, Garcinia oblongifolia* and herbs *Scleria ciliaris, Dicranopteris pedata, Miscanthus floridulus*, with scattered exotic planted tree *Acacia confusa* and *Acacia mangium*. To the southeast of the assessment area lies a small piece of hilltop shrubland. This piece of shrubland is restricted to the top of Ap Tsai Shan. Those dominate species include shrub *Rhodomyrtus tomentosa, Eurya nitida, Rhaphiolepis indica, Embelia laeta* and herb *Dicranopteris pedata, Scleria ciliaris*. Some rare and precious plant species including shrubs and sapling / young trees are identified in this LR which are recorded in **LR11.9 Important Trees & Rare and Precious Species**. Those shrub and plantation trees are generally in fair health condition in this shrubland .

The shrubland is local significant. The landscape amenity and quality are moderate with reasonable tolerance to change. Those vegetation are generally in mature and fair health condition. Therefore, the overall sensitivity of this LR is considered as **medium**.

LR11.1 Woodland

The woodland includes 53,400 nos. of trees and 53.4 ha within the 500 m assessment area of Site SKI-11. Some individual trees or small groups of exotic species (such as *Acacia confusa*) interspersed within Site SKI-11. In the overstorey, the dominance species include *Sterculia lanceolata, Cinnamomum camphora, Ficus hispida, Microcos nervosa* and *Mallotus paniculatus*. Some common species are found in the understorey including shrub *Psychotria asiatica*, and herb *Alocasia macrorrhizos* and *Lophatherum gracile*. This LR exceeds the Site SKI-11 and continues towards the assessment area in the west. This LR dominates the northern, western and eastern parts of the assessment area, covering much of the hillsides. Typical trees include *Sterculia lanceolata, Aporusa dioica, Schefflera heptaphylla, Rhus succedanea, Machilus chekiangensis, Mallotus paniculatus* and *Alangium chinense*, with understory is dominated by shrubs such as *Psychotria asiatica, Rhodomyrtus tomentosa, Diplospora dubia, Microcos nervosa* and herb *Lygodium japonicum, Alocasia macrorrhizos, Lophatherum gracile*. Those vegetation are generally in fair health condition in this LR . Some rare and precious plant species including shrubs, climbers and seedlings of trees are identified in this LR which are recorded in **LR11.9 Important Trees & Rare and Precious Species**.

This woodland is local significant. Those woodland trees have a low suitability of transplanting and are relatively intolerant to change. The quality and significant of this LR are high with relatedly little tolerance to change. The sensitivity of this LR is considered to be **high.**

LR11.5 Roadside Planting

The existing middle-aged roadside and buffer plantings along Yau Yue Wan Village Road, Po Lam Road North, Po Fung Road and Po Hong Road which provide good screening effect and enhance the overall landscape quality of the surrounding environment . This LR within the assessment area is approximately 500 nos. of trees and 2.0 ha. These plantings are mainly common roadside amenity trees and shrubs to screen road alignment and associated structures along linear road network.

These roadside plantings are local significant and provide moderate amenity value to the existing environment. The landscape quality is fair with reasonable tolerance to change. Therefore, the sensitivity of this LR is considered as **medium**.

LR11.3 Plantation

Plantation on hillside including Razor Hill which is approximately 5,300 nos. of trees and 5.3 ha within the assessment area. The northern side and a narrow strip along south and east sides of the Site SKI-11 are covered in plantation trees with some self-seeded native species interspersed. In the northern portion of the Site SKI-11 is occupied by comparatively younger stand which is dominated by *Acacia confusa* and *A. auriculiformis*, and with sparse understorey. The remaining plantation area located along the eastern and southern peripheries of the Site SKI-11 is covered by *Acacia confusa* and mixed with higher proportion of spontaneous growth of or previously retained native tree community including tree *Machilus pauhoi, Bridelia tomentosa, Schefflera heptaphylla*, shrub *Psychotria asiatica, Ilex asprella, Embelia laeta* and herb *Dicranopteris pedata, Lophatherum gracile* and *Cyclosorus parasiticus*. A small portion of this plantation extends further north outside of the assessment area. A swathe of plantation comprised of *Acacia confusa*, *Eucalyptus* species and *Casuarina equisetifolia* which stretches from the Yau Yue Wan Playground to King Yin Lane and Po Lam Road North . Some rare and precious plant species including seedlings, undersized trees (i.e. DBH < 95mm) and trees (i.e. DBH ≥ 95mm) are identified in this LR which are recorded in **LR11.9 Important Trees & Rare and Precious Species**.

The plantation is local significant. Those plantation trees are dense, providing a relatively moderate landscape amenity value. The landscape quality is fair. This LR is a man-made resource and is able to be recreated reasonably easily. Base on it has a reasonable capacity to accommodate change, the sensitivity of this LR is considered as **medium.**

LR11.6a Open Space at Yau Yue Wan Playground

Yau Yue Wan Playground is a 7-a-side soccer pitch together with small areas of amenity planting . This playground located near Yau Yue Wan Road and Yau Yue Wan Village to provide active public open space to local use. This LR located 30 m to the east of the Site SKI-11 is approximately 0.3 ha.

This LR is local significant. The landscape quality of this LR is considered as moderate and could fairly accommodate change. Therefore, the overall sensitivity of this LR is considered as **high**.

Legend

- 500m Assessment Area Boundary
- Site Boundary
- Affected Area Boundary

NOTE: This is a broad brush tree group survey within 500m Assessment Area of **Site SKI-11**. The numbers of trees are approximately number only. The location of baseline landscape resources are mapped in **Figure 5.1.6** and landscape resources photos are recorded in **Figure 5.2.6**.

Rev	Description	By	Date

Consultant

ARUP

Agreement No. NTE/10/2015
Landscape Assessment for Potential Housing Sites in the vicinity of Tseung Kwan O Feasibility Study

Drawing title

Tree survey plan with landscape baseline (sheet 4 of 5) – site SKI-11

Drawing no.			Rev.
Appendix A			-
Drawn: DK	Date: 08/16	Checked: KW	Approved: EL
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Filename : J:\242030\ARUP\LANDSCAPE\OAP-242030-P-SKI-11.dgn

LR12.2 Shrubland / Grassland

This LR refers to the shrubland / grassland mixed located to the north of the Site SKI-12 at Pak Shing Kok and the north of Ha Yeung Shan, as well as a small patch on the top of the engineered slope to the southwest of the Site SKI-12. This LR within the assessment area is approximately 170 nos. of trees and 6.9 ha. The hillside grassland/shrubland in the northern part of the assessment area is dominated by common shrub *Rhaphiolepis indica, Baeckea frutescens*, grass *Miscanthus floridulus, Neyraudia reynaudiana*, and small tree *Aporusa dioica, Rhus chinensis* and *Sapium discolor*. Scattered patches of self-seeded *Leucaena leucocephala* and *Acacia confusa* are also recorded on this grassy shrubland; both are exotic species .

The shrubland / grassland is local significant. The landscape amenity and quality are moderate with reasonable tolerance to change. Those vegetation are generally in middle-aged and fair health condition. Therefore, the overall sensitivity of this LR is considered as **medium**.

LR12.1 Woodland

The woodland located on natural hillside of Siu Chik Sha is 133,000 nos. of trees and 47.5 ha within the 500 m assessment area. The eastern part of the assessment area is dominated by extensive woodland, which extends within the Site SKI-12. Given that the dense vegetation and steep topography on this LR in the Site SKI-12 lies within deep valley. The northern area is occupied by mature shrubs and trees, including *Rhus chinensis*, *R. succedanea. Aporusa dioica, Sapium sebiferum, Alangium chinense, Machilus chekiangensis* and *Mallotus paniculatus.* The climber *Dalbergia benthamii* is throughout the canopy and scattered individuals of exotic planted tree *Acacia confusa* are also recorded. The overstorey of this LR located on Siu Chik Sha is dominated by common tree species including *Aporusa dioica*, *Mallotus paniculatus*, *Machilus chekiangensis*, *Machilus velutina* and *Schefflera heptaphylla* at the north of the Site SKI-12. Its understorey is covered by shrub *Psychotria asiatica*, small tree *Litsea rotundifolia* var. *oblongifolia*, and numerous seedlings of trees *Machilus* spp., *Ardisia* spp., *Aidia canthioides* and *Ormosia pachycarpa.* The woodland to the south of the Site SKI-12 along the channelised watercourse is young woodland, composed of common trees *Litsea glutinosa*, *Machilus* sp., *Mallotus paniculatus*, *Sterculia lanceolata* and *Schefflera heptaphylla*. Shrubs such as *Psychotria asiatica* and herb *Alpinia hainanensis* are recorded in the understorey. The woodland within the ex-landfill site in the western part of the assessment area is extensively dominated by self-seeded, weedy tree *Leucaena leucocephala.* Very limited number of young exotic plantation trees *Acacia* sp. and self-seeded native tree *Macaranga tanarius* var. *tomentosa* are also recorded. Those vegetation are generally in fair health condition within this LR . Some rare and precious plant species including shrubs, climbers and seedlings of trees are identified in this LR which are recorded in **LR12.9 Important Trees & Rare and Precious Species**.

The woodland is local significant. Those woodland trees have a low suitability of transplanting. The quality and significant of this LR are high with relatedly little tolerance to change. The sensitivity of this LR is considered to be high.

LR12.6 Open Space

This LR is an open space at Wan Po Road Pet Garden. This LR located 450 m to the west of the Site SKI-12 is approximately 20 nos. of trees and 0.6 ha within assessment area. This garden located within walking distance to the MTR LOHAS Park Station is adjacent to the Tseung Kwan O South Waterfront Promenade. There are a large pet zone and a small pet zone in the garden with a number of rain shelters and benches, providing a refreshing leisure area for pets and their owners. It provides public facilities including car park, pet activity areas, pet latrines, pet excrete collection bins, pet shower area, rain shelters, benches, lawns, etc. .

The open space is regional significant. This LR has a relatively high amenity value. Those vegetation are generally common species in middle-aged and fair health condition. The landscape quality is moderate with reasonable tolerance to change due to the man-made resource of this LR. Therefore, the sensitivity of this LR is considered as **high**.

LR12.3 Plantation

Plantation on hillside of Siu Chik Sha is approximately 8,300 nos. of trees and 16.5 ha within the assessment area. This LR includes some areas of plantation located near to the grassland within the ex-landfill site along Wan Po Road, another larger continuous patch of southern plantation stands and other areas of plantation located on engineered slopes along roadsides; these are low in floral diversity and have simple structural complexity . Common species are dominated by exotic planted trees include *Acacia confusa, A. auriculiformis* and *Eucalyptus* spp. Vegetation development of the under- and middle-storeys vary in stands, with some stands mainly covered by leaf-litter and limited natural regeneration, while some have the shrub *Psychotria asiatica*, and trees *Aporusa dioica*, *Litsea glutinosa*, *Schefflera heptaphylla* and *Zanthoxylum avicennae*. The western plantation is relatively young in age, with exotic planted trees *Acacia confusa, Eucalyptus* sp., *Casuarina equisetifolia* and self-seed *Leucaena leucocephala* dominating the whole area. Those vegetation are generally in fair health condition. Some rare and precious plant species including seedlings, undersized trees (i.e. DBH < 95mm) and trees (i.e. DBH ≥ 95mm) are identified in this LR which are recorded in **LR12.9 Important Trees & Rare and Precious Species**.

The plantation is local significant. Those plantation trees are dense, providing a relatively moderate landscape amenity value and landscape quality. This LR is a man-made resource and is able to be recreated reasonably easily. Base on it has a reasonable capacity to accommodate change, the sensitivity of this LR is considered as **medium**.

Legend

- 500m Assessment Area Boundary
- Site Boundary
- Affected Area Boundary

NOTE: This is a broad brush tree group survey within 500m Assessment Area of **Site SKI-12**. The numbers of trees are approximately number only. The location of baseline landscape resources are mapped in **Figure 5.1.7** and landscape resources photos are recorded in **Figure 5.2.7**.

Rev	Description	By	Date

Consultant

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Agreement No. NTE/10/2015
Landscape Assessment for Potential Housing Sites in the vicinity of Tseung Kwan O Feasibility Study

Drawing title

Tree survey plan with landscape baseline (sheet 5 of 5) – site SKI-12

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Appendix A			-
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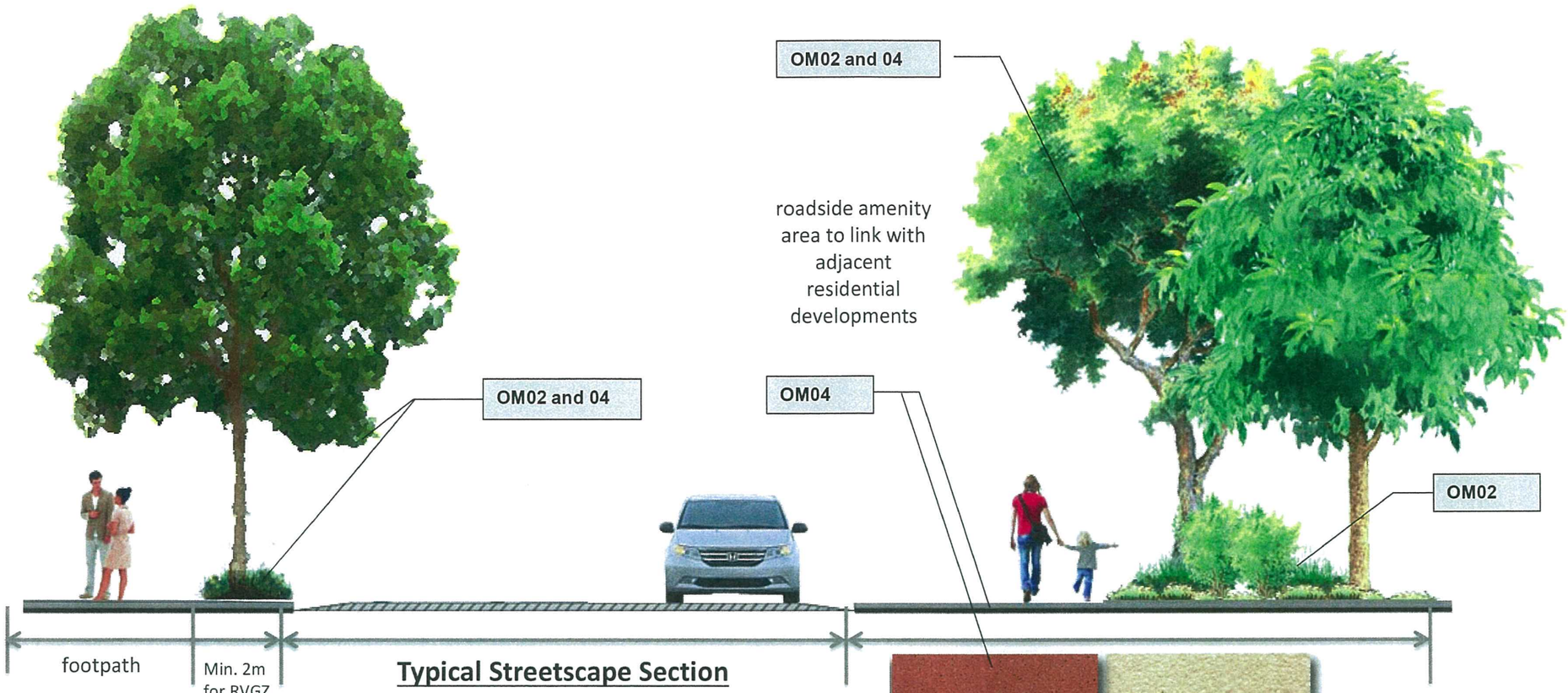
Appendix B

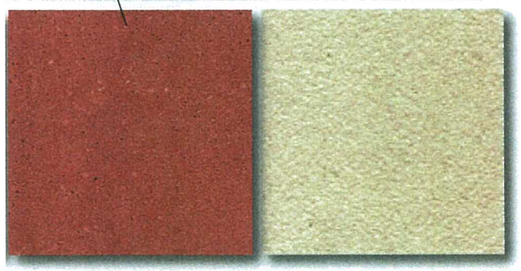
Not Used

Appendix C1

Conceptual Streetscape Design



Typical Streetscape Section

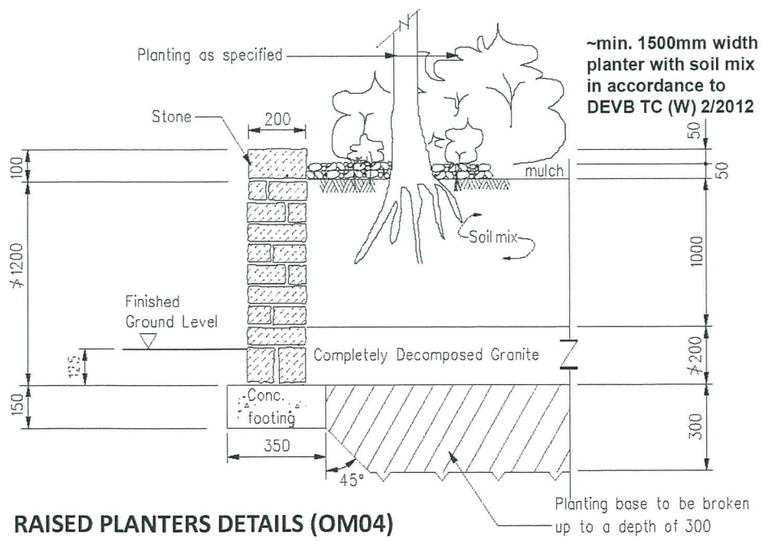


Proposed tonal colour treatment of high quality concrete paver is subject to detail design stage

建議主題概念 Proposed Thematic Concept



All landscape design should be congruent with current Tseung Kwan O Greening Master Plan
Source: http://www.districtcouncils.gov.hk/



RAISED PLANTERS DETAILS (OM04)

Enhance pedestrian-friendly environment the continuity of planting scheme/ the planting strip/planters to be provided where practicable

NOTE: Proposed Streetscape shown in this drawing does not indicate selection of trees planting / vegetation. The proposal for landscape works shall be determined and agreed separately with government during Detailed Design Stage. Landscaping features and form of structures shown in this drawing are indicative only. Color and paving pattern will be congruent with District Paving Master Plan or existing paving in adjacent areas.

Sufficient footpath width, buffer zone shall be allowed for roadside planting as per the indicative drawings in accordance to **DEVB TC (W) 2/2012**.

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Drawing title
CONCEPTUAL STREETSCAPE DESIGN

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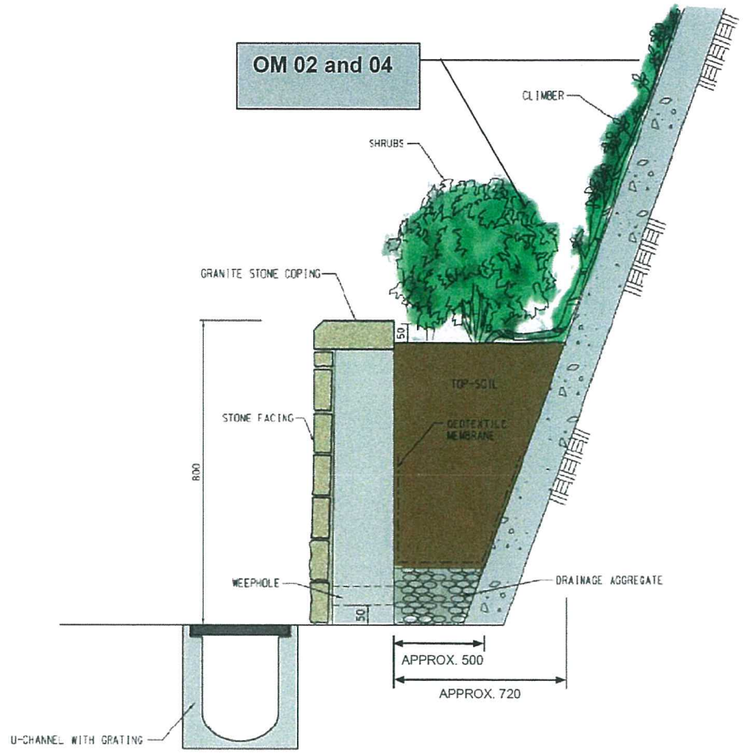
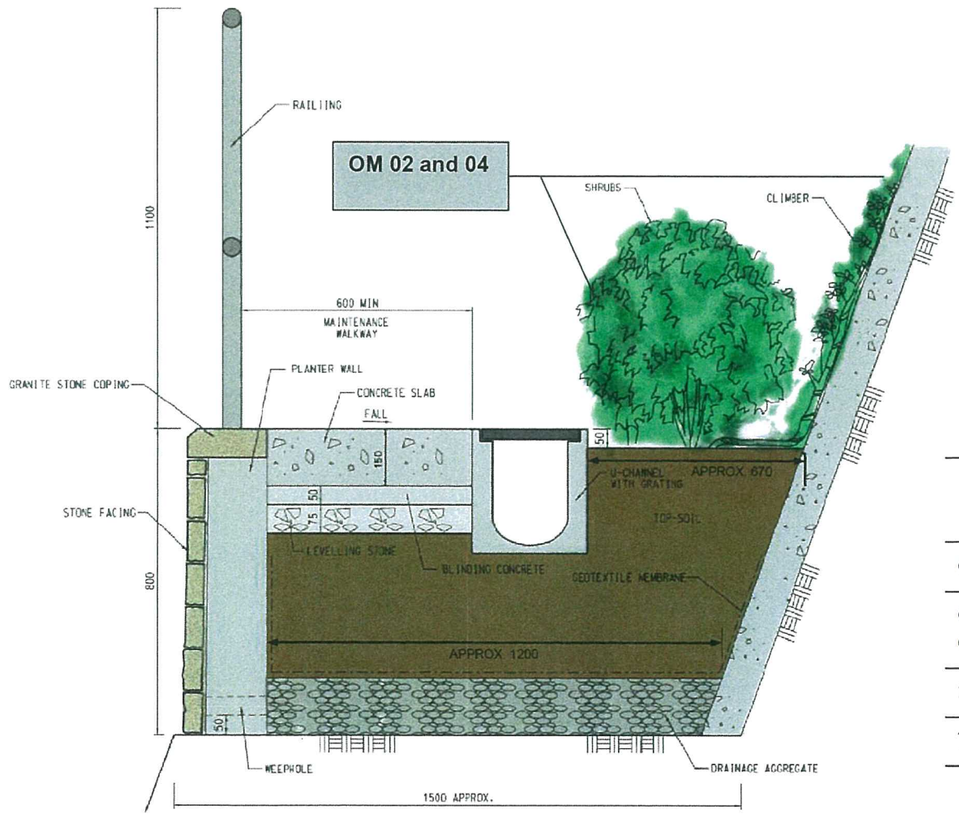
Appendix C2

Typical Landscape Treatment on Slope



TYPICAL SECTION FOR TOE PLANTER
(DIMENSIONS IN mm)



TYPICAL SECTION FOR BERM PLANTER
(DIMENSIONS IN mm)

Vegetation Type	Minimum Depth of Existing Soil or Placed Soil-mix Material over Inert Rock/Rockfill Substrate	Preferred Soil Depth
Grass	150 mm	300 mm
Groundcover/ Climbers	300 mm	600 mm
Shrubs	450 mm	900 mm
Trees	800 mm	>1200 mm

NOTE: Proposed Landscape Treatment on slope shown in this drawing is conceptual only. Slope features and profile will be designed in accordance with **GEO Publication No. 6/2007 –** (Updating of GEO Publication no. 1/2000 - Technical Guidelines on Landscape Treatment and Bio-engineering for Manmade Slopes and Retaining Walls)/ **GEO 1/2011 - Technical Guidelines on Landscaping Treatment for Slopes** in adjacent development at Detail Design Stage.

The roadside planting as well as the landscape treatment on slope are outside public housing site boundary and shall be part of the site formation work and carried out by the government before handing over to HD. Landscape Treatment on slope shall be reviewed and endorsed by Vetting Committee in accordance **to CEDD TC No. 06/2014 - Vetting Committee on Slope Appearance**.

Rev	Description	By	Date

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Landscape Assessment for Potential Housing Sites in the vicinity of Tseung Kwan O Feasibility Study

Drawing title

TYPICAL LANDSCAPE TREATMENT ON SLOPE

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Appendix C3

Typical Landscape Treatment to Natural Terrain Hazard Mitigation Barrier

DO NOT SCALE DRAWING. CHECK ALL DIMENSIONS ON SITE.
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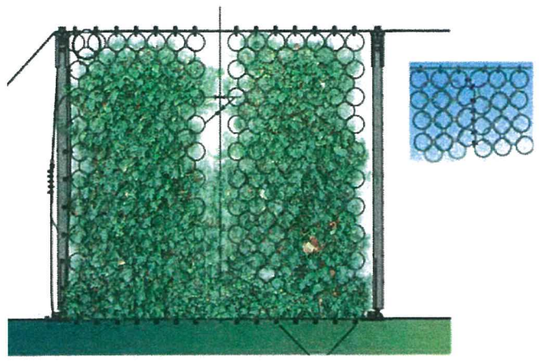
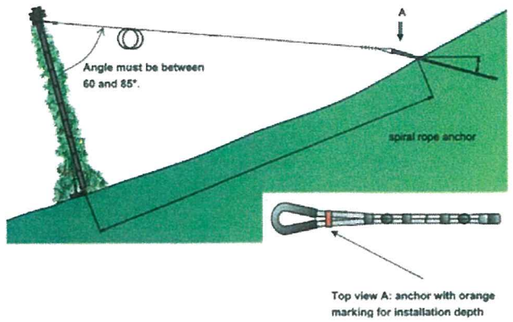
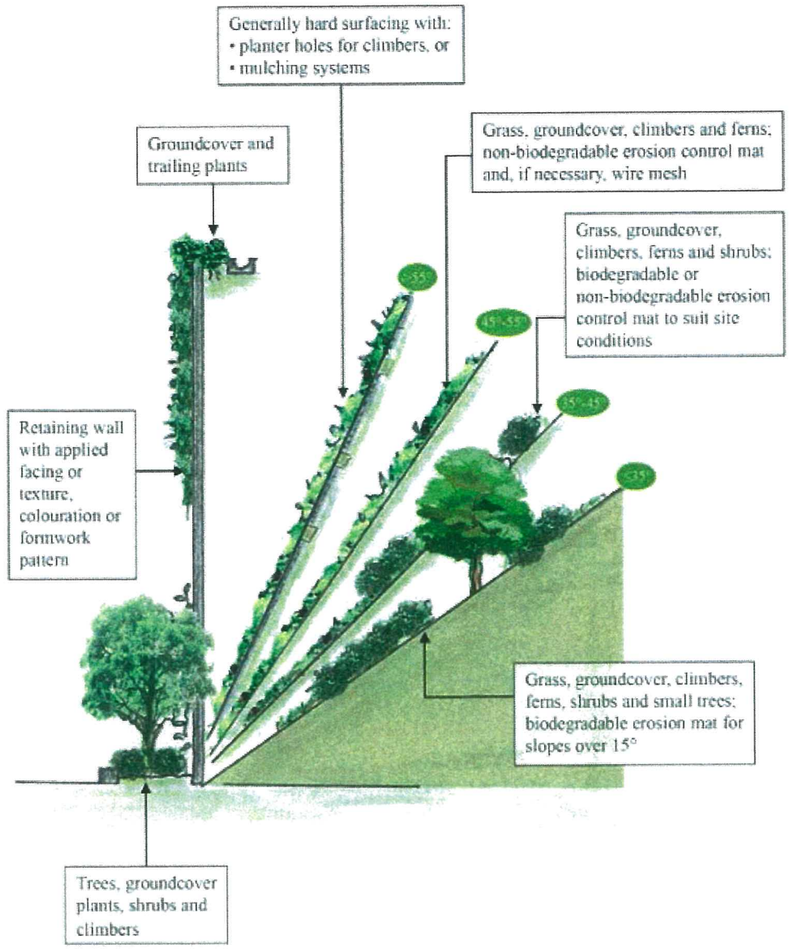
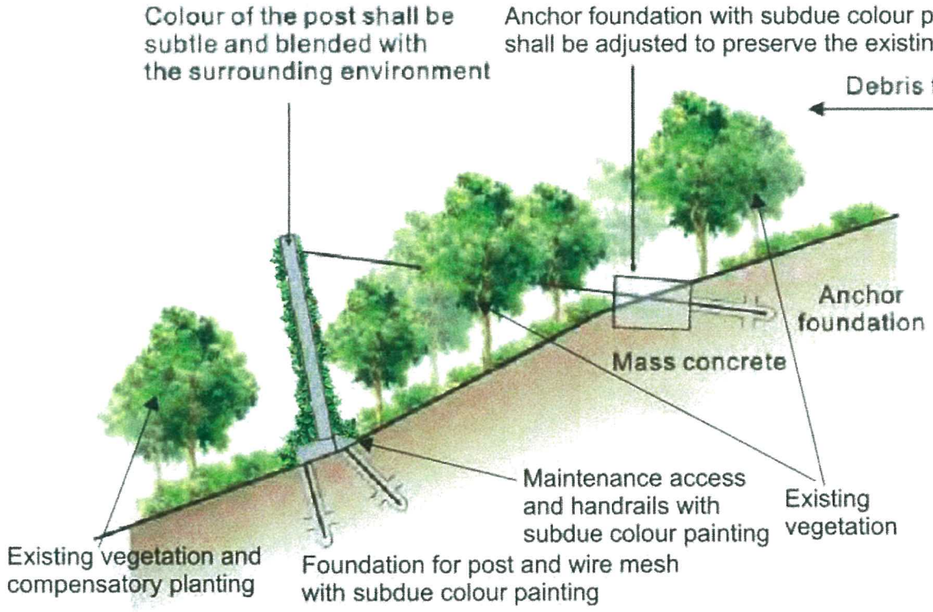
Typical Landscape design – The intention is to make the manmade engineer structures visually compatible to the adjacent landscape context and minimize adverse landscape impact.









FLEXIBLE DEBRIS BARRIER WITH CLIMBER AS GREENING MEASURES

Enhancing biodiversity - Proposed landscape treatment should aim at enhancing biodiversity. Selection of soft landscape should make reference to the existing planting materials found on site. Native species should be used where possible.

All planting should be designed to be self-sustainable and able to regenerate naturally, thereby minimizing long-term ongoing maintenance.

Connection to improve walking trail network will be explored to enhance the connection to existing hiking trails.

Source: GEO Publication No. 1/2011 – *Technical Guidelines on Landscape Treatment for Slopes*



Native Woodland Planting Mix Palette for Screening and enhancing Biodiversity

Notes:
Natural Terrain Hazard Mitigation are to be determined by Geotechnical Engineer. This section only presents the possible landscape treatment.

Natural Terrain Hazard Mitigation is subjected to detail design and future liaison between Geotechnical Engineer and Landscape consultant.

This figure only shows artistic impression to illustrate the design intention only and not site specific.

For details regarding the Natural Terrain Hazard Mitigation, please refer to GEO/2011 – Technical Guidelines on Landscaping Treatment for Slopes in adjacent development at Detail Design Stage.

Rev	Description	By	Date

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Contract No. and Title
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Landscape Assessment for Potential Housing Sites in the vicinity of Tseung Kwan O Feasibility Study

Drawing title
Typical Landscape Treatment to Natural Terrain Hazard Mitigation Barrier

Drawing no.		Rev.
Appendix C3		
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Appendix C4

Greening Measures within Housing Site



GM01 Man-made slope treatment adopting native tree planting

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Landscape Assessment for Potential Housing Sites in the vicinity of Tseung Kwan O Feasibility Study

Drawing title

Greening Measures within Housing Site (1 of 9)

Drawing no.			Rev.
Appendix C4			-
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GM02 Vertical greening (2.5m H max.)

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Drawing title

Greening Measures within Housing Site (2 of 9)

Drawing no.			Rev.
Appendix C4			-
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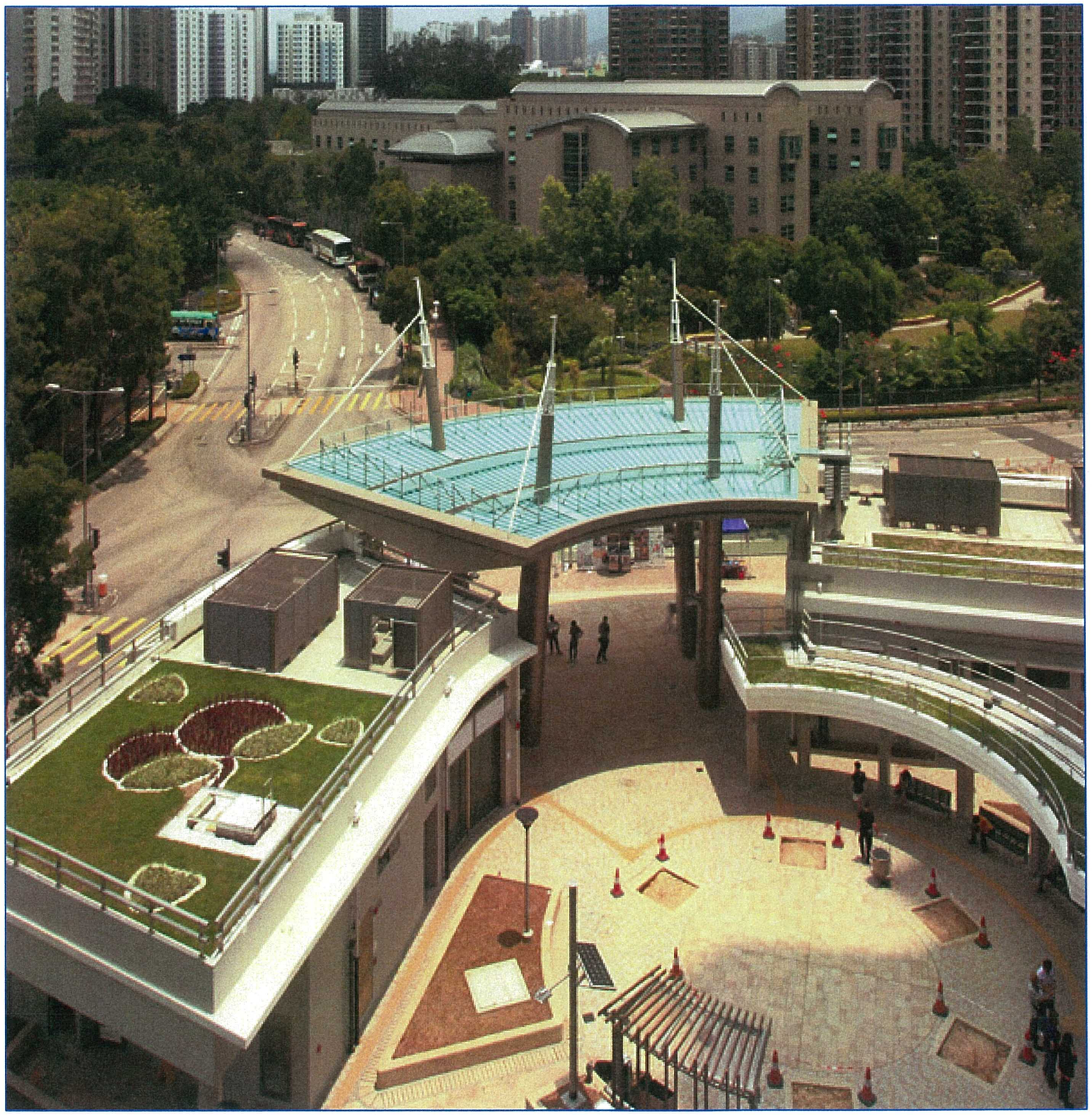

GM03 Green roof at refuse collection point & covered walkway

Rev	Description	By	Date

Consultant

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Agreement No. NTE/10/2015
Landscape Assessment for Potential Housing Sites in the vicinity of Tseung Kwan O Feasibility Study

Drawing title

Greening Measures within Housing Site (3 of 9)

Drawing no.			Rev.
Appendix C4			-
Drawn	Date	Checked	Approved
KW	04/16	EL	EL
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N.T.S.			

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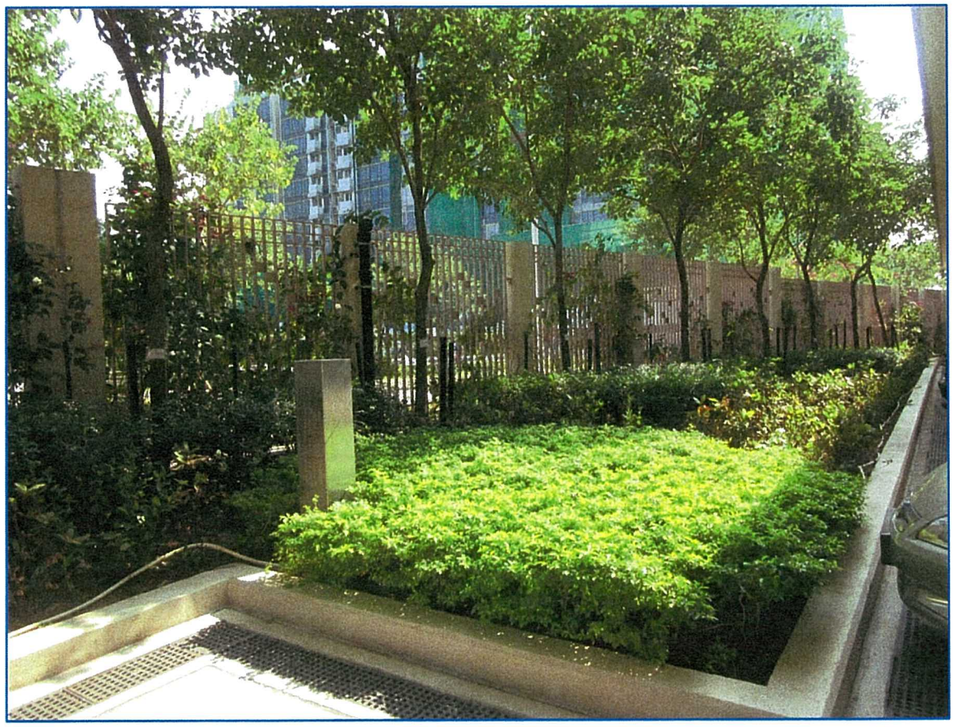

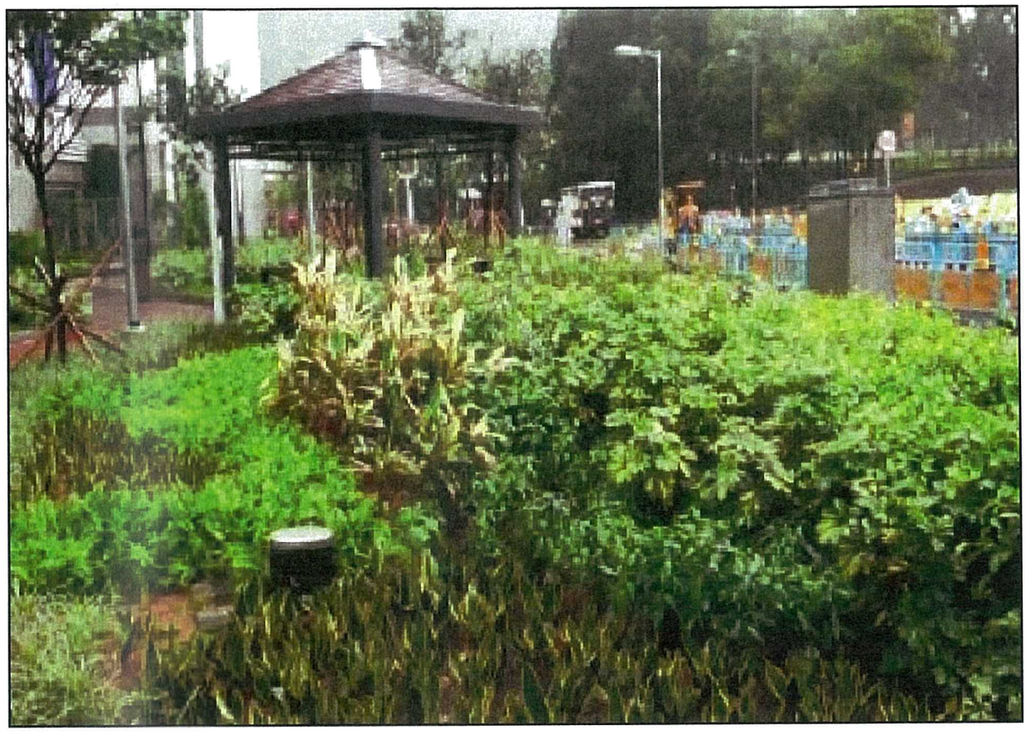

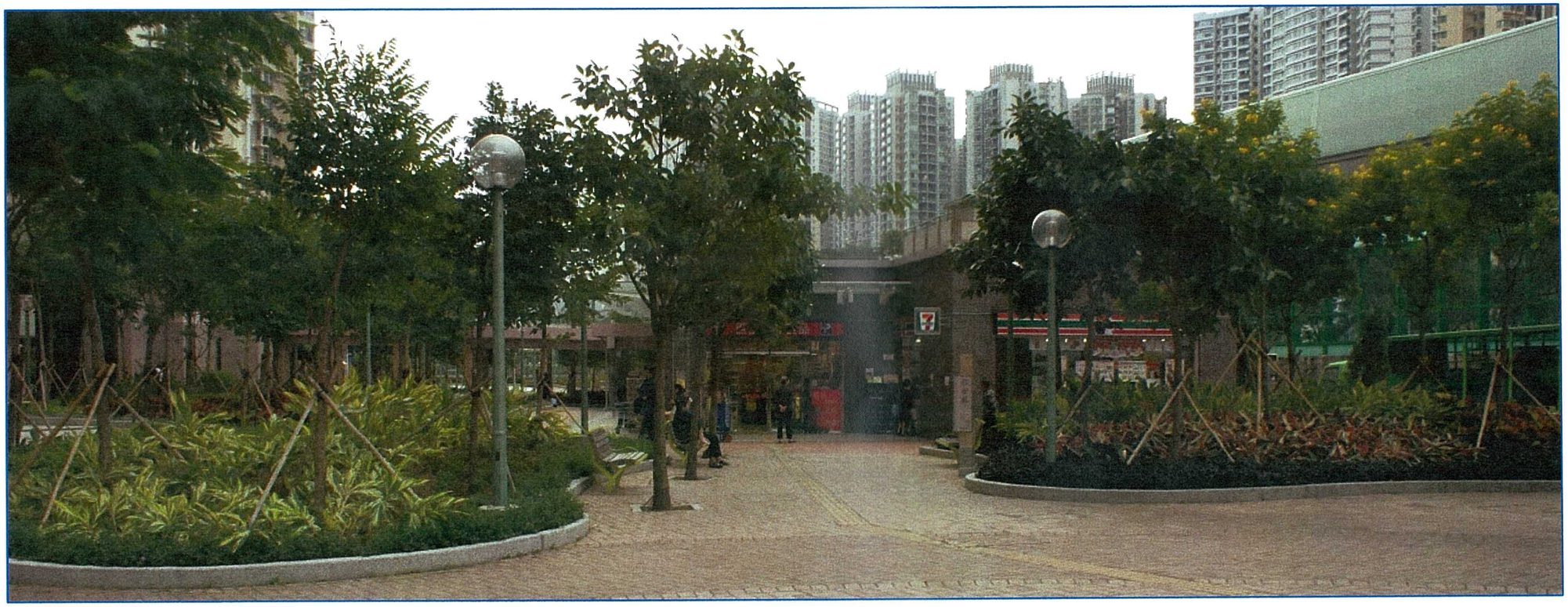

GM04 Ornamental planting with diverse vegetation composition

Rev	Description	By	Date

Consultant

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Landscape Assessment for
Potential Housing Sites in the
vicinity of Tseung Kwan O
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Drawing title

Greening Measures within Housing Site (4 of 9)

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GM05 Grass paper at car parking lots (except basement car park)

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Drawing title

Greening Measures within Housing Site (5 of 9)

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GM06 Transitional planting

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Drawing title

Greening Measures within Housing Site (6 of 9)

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GM07 Open space with chromatic design of hard landscape

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Landscape Assessment for Potential Housing Sites in the vicinity of Tseung Kwan O Feasibility Study

Drawing title

Greening Measures within Housing Site (7 of 9)

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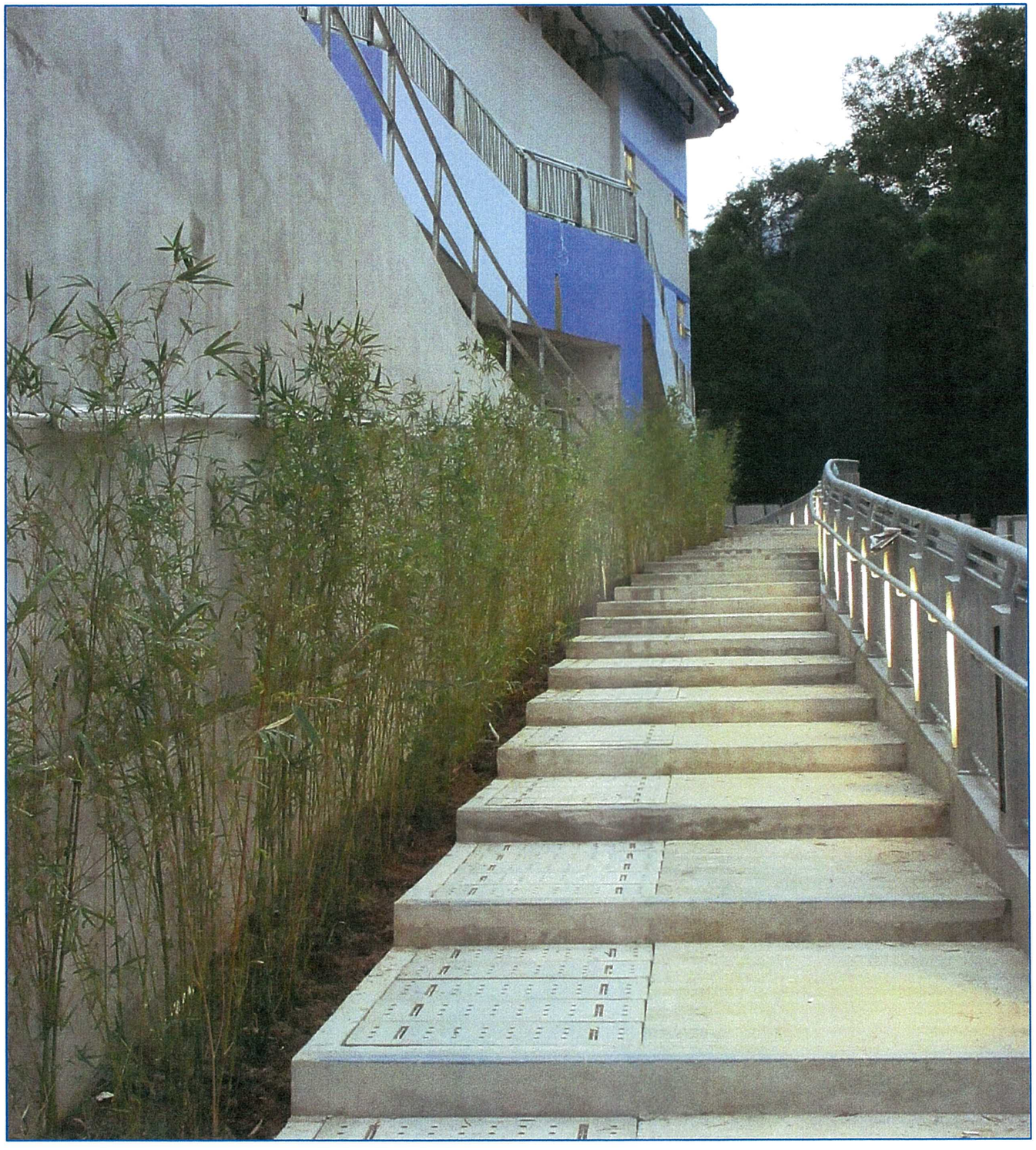

GM08 Reprovision of pedestrian access, footpath & hiking trails

Rev	Description	By	Date

Consultant

ARUP

Agreement No. NTE/10/2015
Landscape Assessment for Potential Housing Sites in the vicinity of Tseung Kwan O Feasibility Study

Drawing title

Greening Measures within Housing Site (8 of 9)

Drawing no.			Rev.
Appendix C4			-
Drawn: KW	Date: 04/16	Checked: EL	Approved: EL
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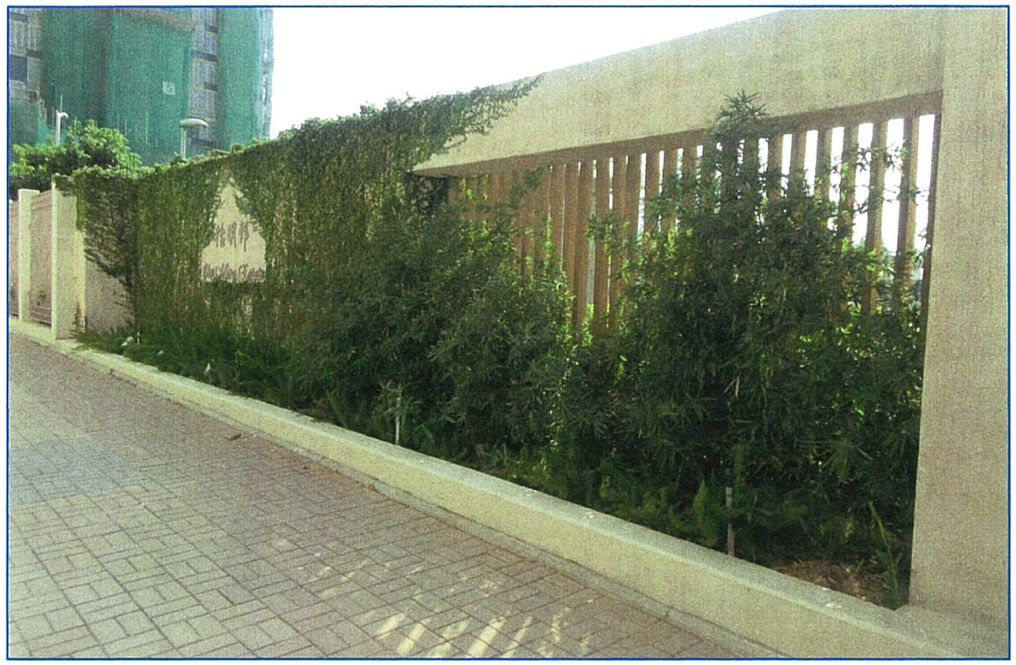



GM09 Planting for screening from traffic

Rev	Description	By	Date

Consultant

ARUP

Agreement No. NTE/10/2015
Landscape Assessment for Potential Housing Sites in the vicinity of Tseung Kwan O Feasibility Study

Drawing title

Greening Measures within Housing Site (9 of 9)

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Appendix C5

Visual Illustration of Green Channels



CM09 Proposed trapezoidal green channel (indicative only)

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Consultant

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Agreement No. NTE/10/2015
Landscape Assessment for Potential Housing Sites in the vicinity of Tseung Kwan O Feasibility Study

Drawing title

Proposed trapezoidal green channel

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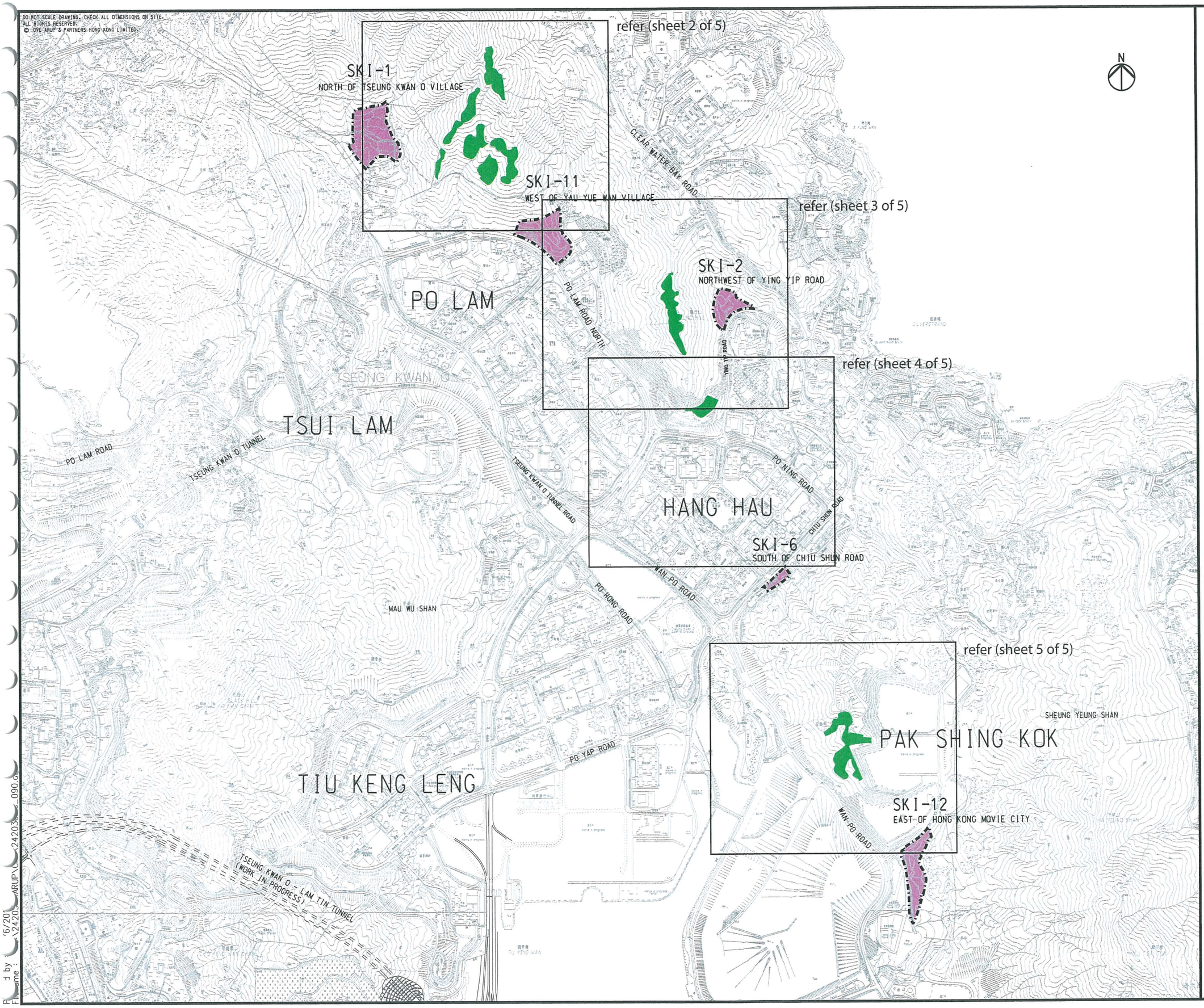
Appendix D

Proposed Woodland Compensatory Area



LEGEND:

INITIAL INDICATIVE LAYOUT OF FIVE TKO HOUSING SITES

PROPOSED WOODLAND COMPENSATION AREA

Rev	Description	By	Date

Consultant

ARUP

Contract No. and Title

Agreement No. CE 61/2014 (CE)

Site Formation and Infrastructural Works for Nine Housing Sites in Tseung Kwan O - Feasibility Study

Drawing title

PROPOSED WOODLAND COMPENSATION AREAS

(Sheet 1 of 5)

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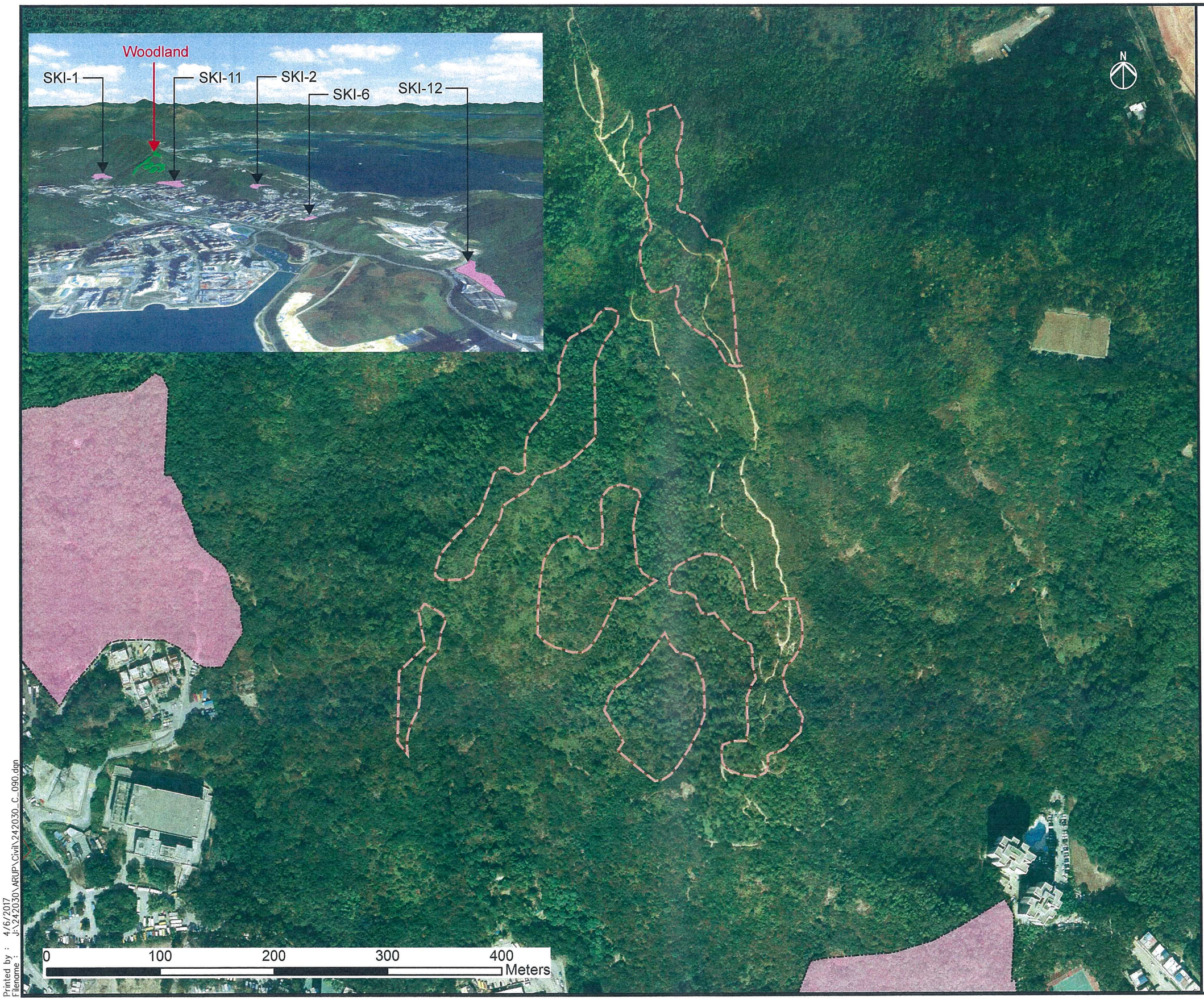

LEGEND:

INITIAL INDICATIVE LAYOUT OF FIVE TKO HOUSING SITES

PROPOSED WOODLAND COMPENSATION AREA

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Contract No. and Title

Agreement No. CE 61/2014 (CE)

Site Formation and Infrastructural Works for Nine Housing Sites in Tseung Kwan O - Feasibility Study

Drawing title

PROPOSED WOODLAND COMPENSATION AREAS

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LEGEND:

INITIAL INDICATIVE LAYOUT OF FIVE TKO HOUSING SITES

PROPOSED WOODLAND COMPENSATION AREA

Rev	Description	By	Date

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Contract No. and Title

Agreement No. CE 61/2014 (CE)

Site Formation and Infrastructural Works for Nine Housing Sites in Tseung Kwan O - Feasibility Study

Drawing title

PROPOSED WOODLAND COMPENSATION AREAS

(Sheet 3 of 5)

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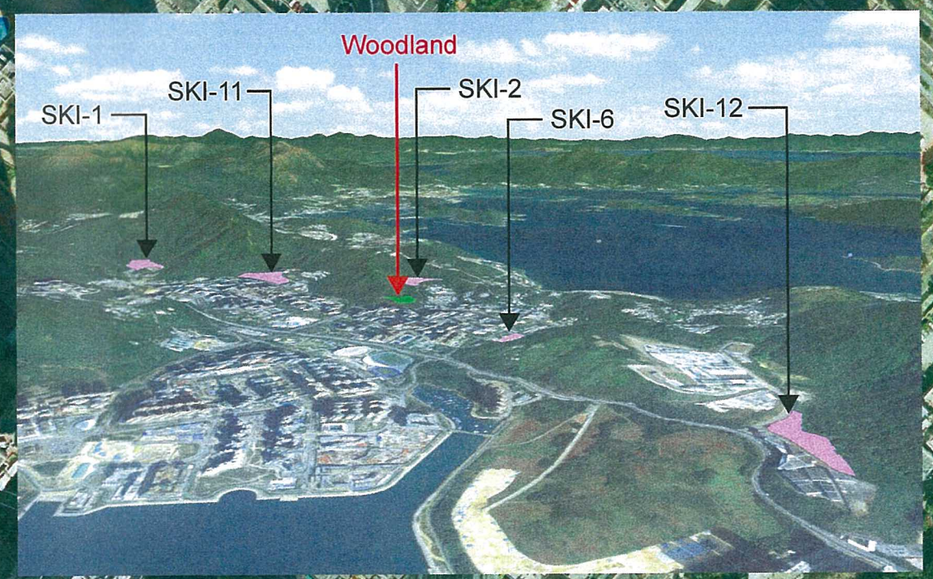
LEGEND:

INITIAL INDICATIVE LAYOUT OF FIVE TKO HOUSING SITES

PROPOSED WOODLAND COMPENSATION AREA



0 100 200 300 400 Meters

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INITIAL INDICATIVE LAYOUT OF FIVE TKO HOUSING SITES

PROPOSED WOODLAND COMPENSATION AREA

Rev	Description	By	Date

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Site Formation and Infrastructural Works for Nine Housing Sites in Tseung Kwan O - Feasibility Study

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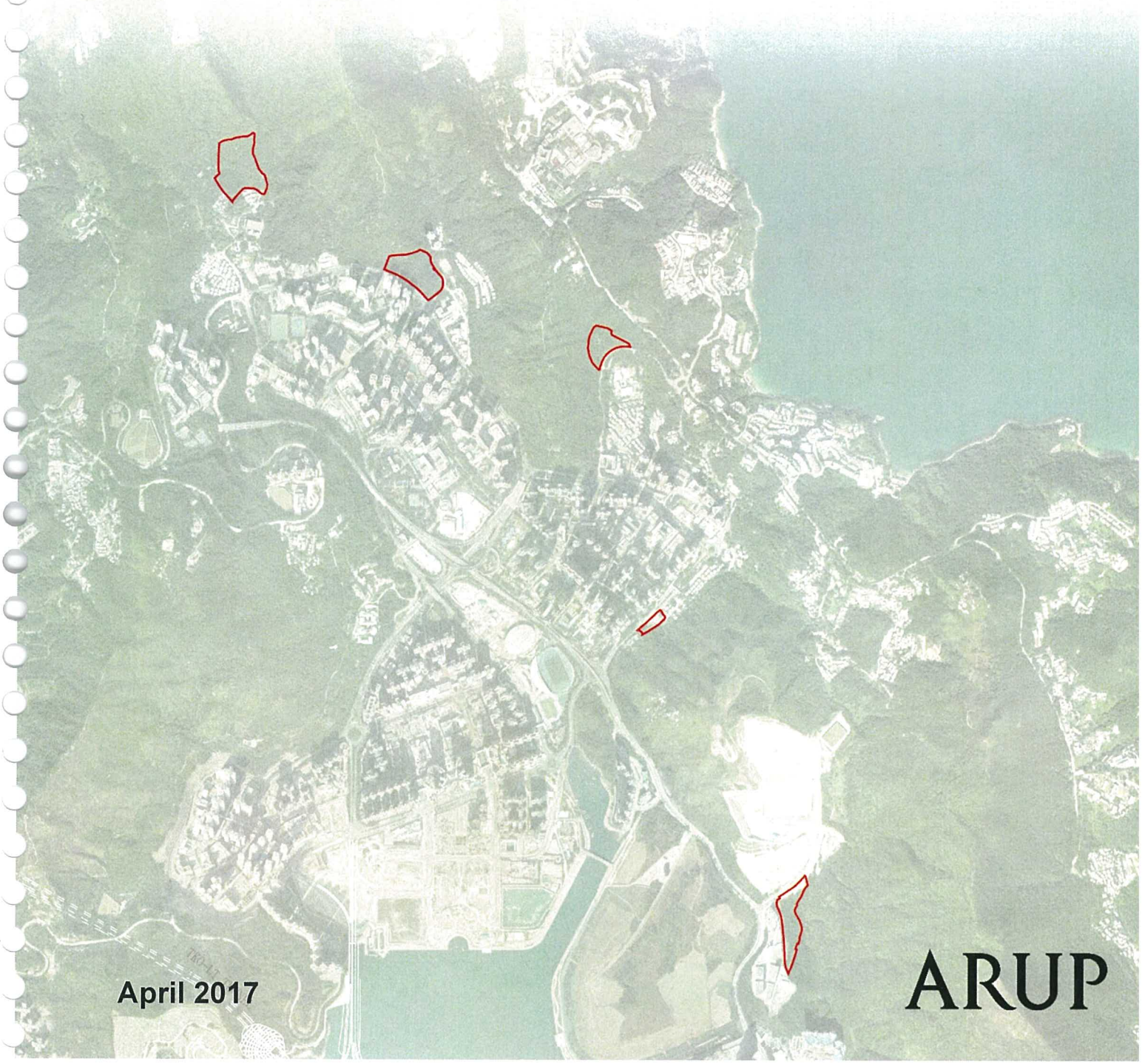
New Territories East Development Office

Agreement No. CE 61/2014 (CE)
Site Formation and Infrastructural Works for Nine Housing Sites in Tseung Kwan O - Feasibility Study

Final Report (Five TKO Sites)
(Rpt Ref. 242030-REP-081-00)



April 2017

ARUP

Civil Engineering and Development Department

Agreement No. CE 61/2014 (CE) Site Formation and Infrastructural Works for nine Housing Sites in Tseung Kwan O – Feasibility Study

Final Report (Five TKO Sites)

242030-REP-081-00

1st Issue | April 2017

This report takes into account the particular instructions and requirements of our client.

It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

Job number 242030

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1 INTRODUCTION

1.1 Background

1.1.1 CEDD commissioned Arup on 28 January 2015 to undertake 'Agreement No. CE 61/2014(CE) – Site Formation and Infrastructural Works for Nine Housing Sites in Tseung Kwan O – Feasibility Study' (this Assignment).

1.1.2 The 9 potential housing sites are scattered in Tseung Kwan O (TKO). The location plans of these 9 potential housing sites are shown in **Drawing No. 242030/C/024**. These sites are mainly zoned "Green Belt" with minor portion of "G/IC" under the current Outline Zoning Plan. Preliminary technical assessments covering site formation, traffic and transport assessment, geotechnical appraisal, environmental study, land requirement, drainage, sewerage, waterworks and utilities study are conducted under the Assignment.

1.1.3 In consideration of various technical aspects and anticipated programme effect, amongst the 9 potential housing sites in TKO, the following 5 housing sites have the potential to provide about 11,260 number of flats as the first development package. On the basis of the findings of the Assignment, no insurmountable technical problems are anticipated for development of these 5 potential housing sites:

(1) Site SKI-1, North of Tseung Kwan O Village;

(2) Site SKI-2, Northwest of Ying Yip Road;

(3) Site SKI-6, South of Chiu Shun Road;

(4) Site SKI-11, West of Yau Yue Wan Village; and

(5) Site SKI-12, East of Hong Kong Movie City.

1.1.4 On the other hand, a further study on the following 4 potential housing sites in TKO is recommended:

(1) Site SKI-3, West of Tsui Lam Estate;

(2) Site SKI-4, Bus Terminus, South of Hong Sing Garden and North of Mau Wu Tsai;

(3) Site SKI-5, North of Po Lam Road South; and

(4) Site SKI-13, South of Po Lam Road.

1.1.5 As per instruction from CEDD, Arup consolidated the findings of the Assignment and prepare technical reports for rezoning of the 5 Sites SKI-1, SKI-2, SKI-6, SKI-11 and SKI-12.

1.2 Scope and Structure of this Report

1.2.1 This Report summarises findings of various preliminary technical assessments and studies of this Assignment. A preliminary programme showing the major activates for implementation of the housing development is also included in this Report.

1.2.2 This Report consists of the following chapters:

(1) Chapter 1 is this chapter and it gives an introduction of the Project background and the contents of this report.

(2) Chapter 2 summarizes the updating of development parameters.

(3) Chapter 3 summarizes the site formation and natural terrain hazard assessment.

(4) Chapter 4 summarizes the preliminary traffic and transport impact assessment.

(5) Chapter 5 summarizes the preliminary drainage study.

(6) Chapter 6 summarizes the preliminary sewerage study.

(7) Chapter 7 summarizes the preliminary waterworks study.

(8) Chapter 8 summarizes the preliminary utilities study.

(9) Chapter 9 summarizes the preliminary environmental study.

(10) Chapter 10 summarizes the land requirement study.

(11) Chapter 11 draws the conclusion.

1.3 Nomenclature and Abbreviations

1.3.1 The following abbreviations are used throughout this report, unless otherwise stated:

AAB	Antiquities Advisory Board
ADWF	Average dry weather flow
AFCD	Agriculture, Fisheries and Conservation Department, HKSARG
AMO	Antiquities and Monuments Office
AOI	Area of Influence
Arup	Ove Arup & Partners Hong Kong Limited
ASR	Air sensitive receiver
CAF	Clearance application form
CBL	Cross Bay Link
CEDD	Civil Engineering and Development Department, HKSARG
CLP	CLP Power Hong Kong Limited
DIA	Drainage Impact Assessment
DR	Drainage Reserve
DSD	Drainage Services Department, HKSARG
E&M	Electrical and Mechanical
EAS	Environmental Assessment Study
EIA	Environmental Impact Assessment
EM&A	Environmental Monitoring and Audit
EPD	Environmental Protection Department, HKSARG
ERA	Estimated Risk Analysis
DEVB	Development Bureau, HKSARG
DEVB TC(W)	Development Bureau Technical Circular (Works)

FWSR	Fresh water service reservoir
GEO	Geotechnical Engineering Office, CEDD
GI	Ground Investigation
GLA	Government Land Allocation
HATS	Harbour Area Treatment Scheme
HD	Housing Department, HKSARG
HGC	Hutchison Global Communications Limited
HKBN	Hong Kong Broadband Network
HKCG	Hong Kong and China Gas Company Limited
HKPSG	Hong Kong Planning Standards and Guidelines
HKSAR	Hong Kong Special Administrative Region
HKSARG	Government of HKSAR
HKUST	Hong Kong University of Science and Technology
HyD	Highways Department, HKSARG
IIL	Initial Indicative Layout
LandsD	Lands Department, HKSARG
LCSD	Leisure and Cultural Services Department, HKSARG
MPF	Mandatory Provident Fund
MTRC	Mass Transit Railway Corporation
NTHS	Natural Terrain Hazard Study
O&M	Operation and maintenance
PAH	Project Administration Handbook for Civil Engineering Works
PER	Preliminary Environmental Review
PlanD	Planning Department, HKSARG
Project	Project of housing development and associated infrastructural works, including planning, design and construction.
PRH	Public rental housing
RSS	Resident site staff
QPME	Quality powered mechanical equipment
SIA	Sewerage Impact Assessment
SSF	Subsidised sale flat
SWPS	Salt water pumping station
SWSR	Salt water service reservoir
TGLA	Temporary Government Land Allocation
TIA	Traffic Impact Assessment
TKO	Tseung Kwan O

TKO-LTT	Tseung Kwan O – Lam Tin Tunnel
TKOPTW	Tseung Kwan O Preliminary Treatment Works
WBTC	Works Branch Technical Circular
WSD	Water Supplies Department, HKSARG

2 DEVELOPMENT PARAMETERS

2.1 Development Parameters

2.1.1 The five TKO housing sites are scattered within TKO. Most of them are located on the hillside near the existing development areas and all are proposed for public housing development. The location plan of the five TKO housing sites is as shown in **Drawing Nos. 242030/C/025** attached at **Annex A**.

2.1.2 In consultation with PlanD and HD, **Table 2.1** below consolidates the planning parameters for each of the proposed five housing sites for technical assessment purpose. The estimated flat number and projected population shown in the table will be tested under various technical assessments of this Study.

Table 2.1 Tentative Development Parameters for Technical Assessments

Site	Description of the Sites	Existing Zoning	Housing Site Area* (ha) (Approx.)	Housing Type**	Flat Number (Approx.)	Population (Approx.)
SKI-1	North of TKO Village	GB	3.94	PRH	3,700	10,360
SKI-2	Northwest of Ying Yip Road	GB	1.48	SSF	1,600	4,480
SKI-6	South of Chiu Shun Road	GB, GIC	0.42	SSF	560	1,568
SKI-11	West of Yau Yue Wan Village	GB	2.91	SSF	2,500	7,000
SKI-12	East of Hong Kong Movie City	GB	2.25	SSF	2,900	8,120
Total	-	-	**11.00**	-	**11,260**	**31,528**

* Excluding area for proposed infrastructural works associated with the housing sites

** For technical assessments only and are subject to change pending further study and design at next stage

Remarks:

(1) The flat number is estimated on the basis of domestic plot ratio of 6.0.
(2) Non-domestic plot ratio of 0.5 is allowed for provision of local commercial and welfare facilities for technical assessments;
(3) Design buffer of 5% to 10% is allowed for technical assessments.

2.2 Initial Indicative Layout

2.2.1 The initial indicative layout (IIL) of the five housing sites is shown on **Drawing No. 242030/C/025.** The Initial Indicative Layout (IIL) has been reviewed and adjusted as summarized below:

Table 2.2 Adjustment of Initial Indicative Layout (IIL)

Site	Proposed Adjustments
SKI-1	The eastern boundary of the Site has been shifted to provide minimum of 15m buffer from the existing natural stream course.
SKI-2	Nil
SKI-6	The western boundary of the Site has been amended to avoid encroachment upon the maintenance area of MTR Pak Shing Kok Ventilation Building.
SKI-11	The north eastern boundary of the Site has been adjusted to avoid encroachment upon the existing Pai Lau at Yau Yue Wan Village Road.
SKI-12	The southern boundary of the Site has been amended to avoid encroachment upon the lot and permanent strata resumption limit of MTR railway tunnels as well as Hong Kong Movie City. The eastern boundary of the Site has been shifted to provide minimum of 15m buffer from the existing natural stream course.

3 PRELIMINARY GEOTECHNICAL, SITE FORMATION AND NATRUAL TERRAIN HAZARD ASSESSMENT

3.1 Existing Topography

3.1.1 The topography of the housing sites is hilly in general except Site SKI-6. The topographical characteristics of the housing sites are as follows:-

Table 3.1 Existing Topography

Site	Existing Topography
SKI-1	The site is located to the north of Tseung Kwan O Upper Village, with ground levels ranging from +30mPD to +100mPD.
SKI-2	The site is located to the west of Clear Water Bay Film Studio beside Ying Yip Road, with ground levels ranging from +32mPD to +50mPD.
SKI-6	The site is abutting Chiu Shun Road with ground levels ranging from +8mPD to +14mPD.
SKI-11	The site is located to the northeast of Po Lam Estate and to the west of Yau Yue Wan Village, with ground levels ranging from +9mPD to +48mPD.
SKI-12	The site is located to the east of Hong Kong Movie City, with ground levels ranging from +36mPD to +60mPD.

3.2 Preliminary Geotechnical and Site Formation Assessment

3.2.1 The proposed site formation schemes are developed with due consideration to site topography, disposition of building blocks, access road arrangements, maximizing buildable areas, excavation volume for site formation and cost effectiveness. Multiple platform arrangement is recommended for Sites SKI-1 and SKI-12 with a view to minimizing excavation volume. Owing to the inherent hilly characteristic of the housing sites, slope works and retaining structures are proposed to cope with the elevation difference. The schematic layouts of site formation are as shown in **Drawings Nos. 242030/C/031, 032 and 036 to 038**.

3.2.2 Based on available geological data, potential fault or fault-related features may exist within all five housing sites. Further site investigation works at the next stage is recommended to facilitate detailed geotechnical and foundation design. No insurmountable problem in respect of geotechnical and foundation works is anticipated.

3.3 Preliminary Natural Terrain Hazard Assessment

3.3.1 Preliminary Natural Terrain Hazard assessment has been conducted. No natural terrain hazard was identified at Sites SKI-6 and SKI-12. Sites SKI-1, SKI-2 and SKI-11 fall within the "Alert" criteria, flexible barriers and/or soil nailing are identified as possible mitigation measures.

4 PRELIMINARY TRAFFIC AND TRANSPORT IMPACT ASSESSMENT

4.1 Road-based Traffic

4.1.1 At present, TKO Tunnel is the major external connection for TKO area. Traffic congestions have already occurred during peak hours. With new developments to be completed progressively, the population of TKO continue to grow, rendering additional traffic load to TKO Tunnel. The Tseung Kwan O – Lam Tin Tunnel (TKO-LTT) which is being constructed will be a new major connection between TKO and Eastern Kowloon, which will relieve traffic load of TKO Tunnel during peak hours. CEDD has commenced construction of TKO-LTT in 2016 for completion in 2021 tentatively.

4.1.2 For the purpose of assessing cumulative traffic and transport impact arising from the proposed developments at the five housing sites, it is assumed that population intake of these housing sites would take place in 2024 the earliest. The potential traffic impact arising from the housing sites was analyzed at the year of population intake and 5 years after population intake. In this connection, the performance of key road links and junctions in 2024 and 2029 was analysed.

4.1.3 Key junctions and road links have been identified within the area of influence (AOI) as shown in **Drawing No. 242030/TIA/002**. The effects of the proposed developments have been assessed for various future scenarios, taking into account of future highway construction programme :

(1) Reference Scenario 2024 (S1): without housing sites + with TKO-LTT + without CBL

(2) Reference Scenario 2024 (S2): without housing sites + with TKO-LTT and CBL

(3) Reference Scenario 2029 (S3): without housing sites + with TKO-LTT and CBL

(4) Project Scenario 2024 (D1): with housing sites + with TKO-LTT + without CBL

(5) Project Scenario 2024 (D2): with housing sites + with TKO-LTT and CBL

(6) Project Scenario 2029 (D3): with housing sites + with TKO-LTT and CBL

4.1.4 The proposed developments are anticipated to generate two-way traffic of approximately 1,100 PCU in the AM peak and 800 PCU in the PM peak. Summary of vehicular trips generated by each housing site is summarized below in **Table 4.1**.

Table 4.1 Summary of Estimated Trips

Site	Flat Type[2]	Est. Flat No.	Estimated Trips (pcu/hr) [1]			
			AM Peak		PM Peak	
			Gen	Att	Gen	Att
SKI-1	PRH	3,700	168	127	92	117
SKI-2	SSF	1,600	104	72	50	67
SKI-6	SSF	560	37	25	17	24
SKI-11	SSF	2,500	163	112	78	105
SKI-12	SSF	2,900	189	130	90	122
Total			**661**	**466**	**327**	**435**

Notes:

1. Include an additional 5% design buffer.
2. For technical assessments only and subject to change pending further study and design at the next stage

Key Road Link Capacity Assessment

4.1.5 The results of key road link capacity assessments for the scenarios with housing sites are summarized in **Table 4.2** below. Two road improvement works have been proposed to alleviate traffic impact arising from the proposed developments. The road improvement works are shown in **Drawing Nos. 242030/C/026, 031 and 032**:

(1) Ying Yip Road of about 880m near Site SKI-2 is currently a single-2-carriageway, which has a 710m long section with gradient up to 10%. In this connection, slow moving traffic and queue are often observed at Ying Yip Road during peak hours. To facilitate the development at Site SKI-2 and improve local traffic condition, a climbing lane is proposed at the north-bound of Ying Yip Road, together with lane width widening for south-bound traffic lane.

(2) About 300m long access road of single-2-carriageway is proposed for connecting Site SKI-1 to Wing Lai Road.

Table 4.2 Performance of Key Road Links

Key Link			Peak	Link Performance (V/C Ratio)						
				Existing	2024		2029	2024		2029
					S1	S2	S3	D1	D2	D3
L7	Tseung Kwan O Tunnel[1]	EB	AM	0.81	0.66	0.55	0.54	0.72	0.60	0.59
			PM	0.70	0.66	0.53	0.51	0.73	0.59	0.58
		WB	AM	1.15	***1.05***	0.85	0.86	***1.15***	0.92	0.95
			PM	0.95	0.71	0.65	0.64	0.76	0.69	0.68
L8	Po Lam Road North (west of Po Hong Road)	EB	AM	0.54	0.63	0.62	0.64	0.64	0.64	0.71
			PM	0.62	0.55	0.55	0.55	0.57	0.57	0.54
		WB	AM	0.51	0.53	0.53	0.52	0.55	0.56	0.55
			PM	0.32	0.36	0.36	0.36	0.36	0.37	0.38
L9	Po Shun Road (north of King Ling Road)	NB	AM	0.21	0.21	0.22	0.22	0.23	0.24	0.23
			PM	0.18	0.21	0.25	0.25	0.22	0.26	0.27
		SB	AM	0.16	0.36	0.24	0.25	0.38	0.26	0.27
			PM	0.18	0.32	0.17	0.16	0.33	0.17	0.17

Key Link			Peak	Link Performance (V/C Ratio)						
				Existing	2024		2029	2024		2029
					S1	S2	S3	D1	D2	D3
L10	Clear Water Bay Road (near Ying Yip Road)	NB	AM	0.55	0.46	0.47	0.46	0.50	0.49	0.48
			PM	0.44	0.47	0.46	0.45	0.48	0.47	0.47
		SB	AM	1.02	***1.08***	***1.08***	***1.08***	***1.11***	***1.10***	***1.12***
			PM	0.94	0.91	0.88	0.88	0.94	0.91	0.92
L13	TKO-LT Tunnel	EB	AM	-	0.45	0.57	0.56	0.49	0.61	0.61
			PM	-	0.50	0.60	0.63	0.52	0.64	0.67
		WB	AM	-	0.61	0.81	0.86	0.63	0.85	0.91
			PM	-	0.56	0.60	0.60	0.59	0.62	0.62
L15	Cross Bay Link	EB	AM	-	-	0.27	0.27	-	0.28	0.29
			PM	-	-	0.29	0.29	-	0.29	0.29
		WB	AM	-	-	0.41	0.45	-	0.44	0.47
			PM	-	-	0.42	0.42	-	0.42	0.42
L18	Po Shun Road (south of King Ling Road)	NB	AM	0.04	0.22	0.19	0.18	0.25	0.22	0.21
			PM	0.05	0.29	0.24	0.25	0.31	0.26	0.28
		SB	AM	0.13	0.55	0.37	0.38	0.57	0.40	0.42
			PM	0.11	0.45	0.17	0.18	0.48	0.19	0.19
L20	Po Yap Road	EB	AM	0.08	0.18	0.17	0.17	0.18	0.17	0.17
			PM	0.07	0.16	0.15	0.15	0.16	0.15	0.15
		WB	AM	0.07	0.12	0.16	0.16	0.12	0.15	0.15
			PM	0.06	0.14	0.15	0.15	0.14	0.15	0.15
L21	Road P2	NB	AM	-	0.45	0.41	0.40	0.49	0.43	0.43
			PM	-	0.50	0.40	0.41	0.52	0.43	0.45
		SB	AM	-	0.61	0.50	0.51	0.63	0.53	0.54
			PM	-	0.56	0.26	0.26	0.59	0.28	0.28
L24	Ying Yip Road	NB	AM	0.89	0.75	0.75	0.74	0.85 / (0.43)	0.85 / (0.43)	0.84 / (0.42)
			PM	0.76	0.80	0.78	0.77	0.80 / (0.40)	0.79 / (0.40)	0.79 / (0.39)
		SB	AM	0.85	0.99	0.95	0.94	***1.06***	***1.05***	***1.06***
			PM	0.84	0.77	0.75	0.75	0.84	0.81	0.82
L26	Hang Hau Road	NB	AM	0.48	0.46	0.46	0.46	0.48	0.48	0.47
			PM	0.47	0.52	0.51	0.51	0.60	0.58	0.57
		SB	AM	0.66	0.67	0.71	0.72	0.73	0.74	0.74
			PM	0.57	0.60	0.59	0.58	0.61	0.60	0.59
L28	Clear Water Bay Road (North of Ngan Ying Road)	NB	AM	0.98	0.86	0.86	0.86	0.92	0.91	0.90
			PM	0.84	0.92	0.91	0.91	0.94	0.93	0.94
		SB	AM	0.96	***1.02***	***1.02***	***1.03***	***1.06***	***1.05***	***1.06***
			PM	0.83	0.87	0.85	0.87	0.90	0.88	0.91
L32	Wan Po Road (north of Wan O Road)	NB	AM	0.37	0.61	0.23	0.25	0.66	0.26	0.28
			PM	0.56	0.65	0.25	0.25	0.67	0.27	0.26
		SB	AM	0.51	0.63	0.36	0.36	0.66	0.38	0.38
			PM	0.35	0.53	0.27	0.28	0.57	0.30	0.31

Notes:

1. Accumulated queuing vehicles also included for traffic assessment purpose
2. Number in bracket denotes the performance of road link after completion of proposed improvement works.

4.1.6 It is anticipated that road-based external traffic of all five housing sites would mainly use Tseung Kwan O Tunnel (TKO Tunnel) and Tseung Kwan O – Lam Tin Tunnel (TKO-LTT). Upon commissioning of TKO-LTT, the traffic congestion of TKO Tunnel would be alleviated. The traffic model revealed that the v/c ratio for TKO Tunnel and TKO-LTT would be 0.95 and 0.91 in 2029 respectively indicating both tunnels would be operating with spare capacity hence the traffic condition is considered manageable. Cross Bay Link (CBL) is planned to link up the eastern part of TKO with TKO-LTT. With the implementation of Cross Bay Link, the traffic condition of TKO Tunnel would be further improved.

4.1.7 The five housing sites will generate about 30 pcu/hr at peak hour to Clear Water Bay Road (south bound). In view of the slightly over saturated situation at Clear Water Bay Road, investigation and exploration of Improvement schemes along Clear Water Bay Road are recommended at next stage to improve the situation.

4.1.8 The link assessment results reveal that under scenarios without commissioning of CBL (i.e. scenarios S1 and D1), the capacity of TKO Tunnel would be exceeded under both Reference and Project scenarios during the morning peak hour. Hence, the implementation of the proposed housing developments was considered technically feasible with implementation of CBL.

Key Junction Capacity Assessment

4.1.9 It is envisaged that CBL would be in place prior to intake of the proposed housing developments, the performance of key junctions have therefore been assessed for scenarios with CBL in place. Considering a general higher traffic demand was identified for year 2029, the assessment results for year 2029 under scenarios S3 and D3 were summarized below in **Table 4.3**.

Table 4.3 Performance of Key Junctions in Year 2029

Junction		Type	S3 Junction Performance[1]		D3 Junction Performance[1]	
			AM	PM	AM	PM
J1	Po Lam Road North / Po Hong Road	Signal	31%	69%	19% (56%)	48% (>100%)
J2	Po Lam Road / Tsui Lam Road	Signal	39%	82%	39%	82%
J3	Po Lam Road / Lam Shing Road	Signal	50%	80%	49%	79%
J4	Po Ning Road / Po Shun Road / Po Lam Road North	Roundabout	0.71	0.52	0.77	0.56
J5	Po Ning Road / Sheung Ning Road / Ying Yip Road	Roundabout / Signal	0.85	0.74	***0.95*** (16%)	0.75 (27%)
J6	Clear Water Bay Road / Ying Yip Road / Hang Hau Road	Roundabout	0.78	0.61	0.84	0.64
J7	Po Ning Road / Chiu Shun Road / Hang Hau Road	Roundabout	0.29	0.24	0.30	0.25
J8	Wan Po Road / Po Yap Road / Chiu Shun Road	Roundabout	0.43	0.35	0.44	0.37
J9	King Ling Road / Po Shun Road / Tong Ming Street	Roundabout	0.44	0.38	0.48	0.42
J11	Chui Ling Road / Po Shun Road / Po Yap Road/Road P2	Roundabout / Signal	16%	68%	9%	56%
J12	Po Yap Road / Tong Yin Street	Signal	24%	18%	24%	17%
J13	Po Yap Road / Tong Chun Street	Signal	16%	41%	16%	40%
J14	Po Yap Road / Po Hong Road / Chi Shin Street	Roundabout	0.30	0.23	0.31	0.23
J15	Pak Shing Kok Road / Wan Po Road	Signal	>100%	>100%	>100%	>100%

Junction		Type	S3 Junction Performance(1)		D3 Junction Performance(1)	
			AM	PM	AM	PM
J16	Lohas Park Access Road / Wan Po Road	Signal	>100%	>100%	>100%	>100%
J17	Shek Kok Road / Wan Po Road	Signal	10%	48%	8%	43%
J18	Wan O Road / Wan Po Road	Signal	37%	43%	36%	42%
J23	Ngan Ying Road / Clear Water Bay Road	Signal	15%	18%	10%	14%
J24	Po Fung Road / Po Hong Road	Signal	93%	>100%	55%	94%
J25	Po Fung Road / Po Lam Road North / Yau Yue Wan Village Road	Signal	62%	73%	45%	55%
J26	Kai King Road / Po Lam Road North	Signal	90%	63%	88%	58%
J27	Ngan O Road / Chiu Shun Road	Signal	47%	98%	43%	93%
J28	Po Lam Road / Po Lam Road South / Po Lam Road North	Priority	0.39	0.32	0.39	0.33

Notes:

1. Number in bracket denotes the performance of junction after completion of proposed improvement works.
2. Number shown represent 'Design Flow to Capacity' (DFC) for priority junctions and roundabouts and 'Reserve Capacity' (RC) for signal controlled junctions.

4.1.10 The junction improvement works are proposed at the Junctions J1 and J5 to cope with the development of the housing development. The proposed junction layout for J1 and J5 are shown in **Drawings Nos. 242030/C/042 and 043**.

(1) J1 – Junction between Po Lam Road North / Po Hong Road

(2) J5 – Junction between Po Ning Road / Sheung Ning Road / Ying Yip Road

4.1.11 Conversion of J5 from existing roundabout to a signalised junction has been proposed by Transport Department in their report[1]. If the proposed improvement works is not implemented before population intake of the housing sites, the improvement works should be undertaken by this Project. Local concern on provision of subway connection across Ying Yip Road leg is noted and its feasibility and formation of subway scheme is recommended to be reviewed at next stage of the Project.

4.1.12 In addition, the following junction improvements have been planned or proposed by others, the implementation of these junction improvements shall be reviewed at the next stage where appropriate:

(1) J11 – Junction between Chui Ling Road / Po Shun Road / Po Yap Road / Road P2

(2) J23 – Junction between Ngan Ying Road / Clear Water Bay Road

[1] Report on the Progress of the Stage II Improvement Works of the Roundabout at Ying Yip Road (Amendment 1)

4.2 Railway-based Traffic

4.2.1 On the basis of the available information[2], the passenger throughput of the busiest section (viz. between Yau Tong Station and Quarry Bay Station) of the MTR Tseung Kwan O Line was about 46,400 per hour during the morning peak hour in 2015. It corresponds to loading rate of 97% for 4 ppsm[3] or 69% for 6 ppsm.

4.2.2 It is noted that MTRCL awarded the signalling system upgrading contract in March 2015 to replace the signalling systems of seven railway lines. The upgrading works of Tseung Kwan O Line is scheduled for completion in 2021. With the completion of the upgrading of signalling system amongst other railway lines, the overall carrying capacity can be increased by around 10 percent. On this basis, the capacity of TKO Line is assumed to increase from 67,500 to 74,250 after completion of signaling system upgrading works.

4.2.3 Shatin Central Link will serve as the fourth cross-harbour railway line. With the full commissioning of Shatin Central Link, it is anticipated that some passengers who travel via Tsuen Wan Line, Tseung Kwan O Line and Tung Chung Line for crossing the harbour will switch to Shatin Central Link for their cross-harbour journey. This will be conducive to relieving the burden of the existing Tseung Kwan O Line.

4.2.4 With commissioning of Shatin Central Link, the passenger throughput of Tseung Kwan O Line is estimated to be 42,600 per hour in 2031. It is estimated that the housing sites will generate additional passenger throughput of 2,100 per hour to this critical section. It is envisaged that, with the development at the housing sites, the total passenger throughput at this critical section would increase to 44,700 per hour in 2031. It corresponds to loading rate of 84% for 4 ppsm or 60% for 6 ppsm.

4.2.5 In the light of the above, it is anticipated that the housing development of the five sites will not pose unacceptable impact to Tseung Kwan O Line.

4.3 Pedestrian Connectivity and Public Transport

4.3.1 Pedestrian connectivity and public transport provisions of the housing sites have been assessed.

4.3.2 A footbridge and associated lift towers are proposed at Site SKI-2 to provide a passage across Ying Yip Road.

4.3.3 Two Sites SKI-6 and SKI-11 are within walking distance to MTR Hang Hau Station and Po Lam Station, and there are existing GMB/bus routes near these sites. In this connection, these two sites could be served by MTR, GMB/bus routes.

4.3.4 Three Sites SKI-1, SKI-2, and SKI-12 are beyond walking distance of MTR stations. Hence, feeder-bus services to / from nearby MTR Stations are proposed to serve residents of the housing sites. Long haul bus routes might be provided to meet the public transport demand of these sites, subject to further investigation at the next stage of the Project.

[2] LegCo Paper No. CB(4)854/15-16(07) refers
[3] "ppsm" denotes persons (standing) per square meter

4.4 Summary

4.4.1 With appropriate mitigation measures and commissioning of Cross Bay Link, the development of the five sites for residential use will not pose adverse traffic impact to the area.

5 PRELIMINARY DRAINAGE STUDY

5.1 Existing and Planned Drainage System

5.1.1 Runoff of the five housing sites in TKO discharge to Junk Bay through trunk box culverts along Po Shun Road, Chiu Shun Road, Po Yap Road and Wan O Road. The housing sites are mainly zoned as Green Belt and unpaved.

5.1.2 With reference to the existing drainage records obtained from Drainage Services Department (DSD), the existing drainage systems identified within and in the vicinity of the development sites are summarized as follows:

Table 5.1 Existing Drainage Systems

Site	Existing Drainage Systems
SKI-1	Runoff within the site area is currently intercepted by the two existing natural streams running outside the eastern and western perimeters of the site, and conveyed to the downstream box culverts at Po Lam Road North.
SKI-2	Two existing natural streams are found running through the site area and discharged to the existing cross road drain at Ying Yip Road and further downstream to the box culvert at Yue On Lane.
SKI-6	The site area encroaches upon a Drainage Reserve for the connection point to an existing box culvert along Chiu Shun Road.
SKI-11	4 nos. of existing stormwater drainage outlets are identified near the south-western and south-eastern perimeters of the site for discharge to the existing drainage pipes along Po Lam Road North and Yau Yue Wan Village Road.
SKI-12	Runoff within the site area is currently intercepted by the existing natural streams running within the site and outside the eastern perimeter of the site, and conveyed to the downstream nullah near the roundabout at Shek Kok Road.

5.1.3 There is no flooding blackspot in the vicinity of the five housing sites. The five housing sites, with existing ground levels much higher than extreme sea levels, are not at risk of backwater effect and coastal flooding. A preliminary checking on the hydraulic model obtained from DSD was carried out and it is observed that no flooding problem is expected under the scenario with 50 year and 200 year rainfall events.

5.2 Proposed Drainage System

5.2.1 The proposed development will lead to an increase in area of impermeable surfaces and hence the peak surface runoff rates. The maximum flow of the existing drainage system under the ultimate scenario has been extracted from hydraulic models obtained from DSD and the peak surface runoff from each development site has been estimated using Rational Method.

5.2.2 The adequacy of the existing drainage system to accommodate the increase in peak surface runoff due to the proposed development has been preliminarily assessed. For Site SKI-11 with substantial increase in peak flow, two drainage mitigation options have been considered: (i) upgrading of the existing drainage systems to accommodate the additional peak surface runoff; and (ii) providing on-site storage at the development site to attenuate the peak surface runoff rate in case drainage upgrading works are considered undesirable due to potential land resumption and nuisance to the public. The proposed drainage

mitigation measures would be further reviewed and assessed under the detailed DIA Study to be conducted at the next stage of the Project. For the option of providing on-site storage at Site SKI-11 to attenuate peak surface runoff, the preliminary size of the storage tank is $140m^2$ x 5m (H)[4].

5.2.3 Some existing major natural stream courses and engineering drainage systems encroach upon the proposed site formation and Infrastructure works and may require to be modified and/or diverted as shown in **Drawings Nos. 242030/C/061, 062 and 068 to 070**.

5.2.4 With the proposed drainage upgrading / diversion works recommended, which will be assessed in further details at the next stage of the Project, no insurmountable drainage problem and drainage impact arising from the proposed development are anticipated.

[4] The proposed on-site storage tanks are sized based on the following assumptions:-
(1) Synthetic Rainstorm profile for 20 mins duration (i.e. from 10 mins before the peak to 10 mins after the peak) is assumed.
(2) 50-year return period is assumed.
(3) All additional runoff intercepted within the 20 mins period are assumed to be stored in the storage tanks.

6 PRELIMINARY SEWERAGE STUDY

6.1 Existing and Planned Sewerage System

6.1.1 The five housing sites fall within the sewerage catchment of Tseung Kwan O Preliminary Treatment Works (TKOPTW).

6.1.2 With reference to the existing sewerage records obtained from Drainage Services Department (DSD), the existing sewerage systems identified within and in the vicinity of the development sites are summarized as follows:

Table 6.1 Existing Sewerage Systems

Site	Existing Sewerage Systems
SKI-1	Existing sewers are identified at Wing Lai Road and Po Hong Road.
SKI-2	Existing sewers are identified at Ying Yip Road, which is currently serving Hang Hau Village.
SKI-6	Existing trunk sewers are identified along Chiu Shun Road which conveys sewage flow to TKOPTW for further treatment and disposal via sewage tunnel running outside southern eastern perimeter of the site.
SKI-11	Existing sewers are identified at Yau Yue Wan Village Road and Po Lam Road North. An existing HKUST Sewerage Tunnel is running across the site.
SKI-12	Existing sewers are identified at Pak Shing Kok Road and Wan Po Road.

6.1.3 New sewerage systems are being planned at Tseung Kwan O Upper Old Village and Mau Wu Tsai Village, the implementation programme of which is not confirmed and subject to review by relevant departments.

6.2 Proposed Sewerage System

6.2.1 The sewage flow generated from the proposed development has been estimated using the development parameters as presented in Chapter 2 of the report together with the relevant sewage unit flow factors from EPD's "Guidelines for Estimating Sewage Flows for Sewage Infrastructure Planning" and DSD's Sewerage Manual.

6.2.2 New sewerage pipes are proposed at each development site to collect and convey the generated sewage flows to the existing / new / upgraded sewerage system. The estimated average dry weather flow (ADWF) and the proposed sewerage connections are summarized as follows:

Table 6.2 Proposed Sewerage Connections

Site	ADWF (m^3/day)	Proposed Sewerage Connections	PTW
SKI-1	2,468	Proposed sewers along new access road, and existing sewers at Wing Lai Road.	TKOPTW
SKI-2	1,050	Existing and proposed sewers along Ying Yip Road.	TKOPTW
SKI-6	360	Existing sewer at the south eastern corner of the site, and existing sewage tunnel.	TKOPTW
SKI-11	1,687	Existing sewer along Po Lam Road North.	TKOPTW
SKI-12	1,870	Existing and proposed sewers along Pak Shing Kok Road.	TKOPTW
Total	7,435	-	TKOPTW

6.2.3 Based on the preliminary assessment, the design capacity of TKOPTW is considered adequate to handle the sewage arising from the five proposed housing sites. The current installed capacity of TKOPTW has not reached its design capacity. The current installed capacity of TKOPTW can be increased to its design capacity subject to the flow build-up in TKO. The capacity of TKOPTW and associated sewage system will be further reviewed at the next stage of the Project.

6.2.4 The adequacy of the existing / planned sewers to accommodate sewage flow generated from the proposed development has been preliminarily assessed. The existing / planned sewers which is required to be upgraded are as shown in **Drawings Nos. 242030/C/061, 062 and 068 to 070**.

6.2.5 An existing HKUST sewerage tunnel is identified within Site SKI-11. Its exit section of about 50m is proposed to be diverted or modified to suit the housing development at Site SKI-11.

6.2.6 With the proposed new sewerage, sewerage upgrading / diversion works recommended, which will be assessed in further details at the next of the Project, no insurmountable sewerage impact arising from the proposed development is anticipated.

7 PRELIMINARY WATERWORKS STUDY

7.1 Existing Fresh and Salt Water Supply System

7.1.1 The five housing sites in TKO fall within / located in close proximity to the TKO West Low Level Fresh Water Service Reservoir (FWSR) Supply Zone and the TKO East Low Level FWSR Supply Zone. These fresh water supply zones are currently served by 2 nos. of FWSRs, namely: TKO West Low Level FWSR and TKO East Low Level FWSR. All 2 nos. of FWSRs are fed by the Pak Kong Treatment Works via TKO Primary FWSR.

7.1.2 The five housing sites in TKO fall within / located in close proximity to the TKO West Low Level Salt Water Service Reservoir (SWSR) Supply Zone. The salt water supply zone is currently served by TKO Salt Water Pumping Station (SWPS) and TKO West Low Level SWSR.

7.1.3 Existing fresh and salt water supply systems identified within and in the vicinity of the development sites are summarized as follows:

Table 7.1 Existing Water Supply Systems

Site	Existing Water Supply Systems
SKI-1	Existing fresh water mains are identified running across the site and in vicinity of Tseung Kwan O Upper Village. No existing salt water mains are found in the immediate vicinity of the site. The nearest existing salt water mains are identified at Wing Lai Road.
SKI-2	Existing fresh water mains are identified along Ying Yip Road. No existing salt water mains are found in the immediate vicinity of the site. The nearest existing salt water mains are identified at J/O Ying Yip Road and Chap Fuk Road.
SKI-6	Existing fresh and salt water mains are identified along Chiu Shun Road. Existing salt water main is also found along the north eastern perimeter of the site.
SKI-11	Existing fresh and salt water mains are identified along Yau Yue Wan Village Road and Po Lam Road North.
SKI-12	Existing fresh and salt water mains are identified at Pak Shing Kok Road.

7.1.4 The planned fresh and salt water supply systems identified within and in the vicinity of the development sites are summarized as follows:

(1) New fresh trunk water mains have been proposed to be laid along Wan Po Road and Po Hong Road under WSD's "First Stage of Desalination Plant at Tseung Kwan O" project for delivery of desalinated water to fresh water service reservoirs at Tseung Kwan O. The proposed works are scheduled for construction from late 2016 to 2020 tentatively.

(2) No planned salt water supply system is identified in the vicinity of the development sites.

7.2 Proposed Fresh and Salt Water Supply System

7.2.1 The fresh and salt water demand arising from the proposed development has been estimated using the development parameters as presented in Chapter 2 of the report together with the relevant Unit Flow Factor from WSD's Departmental Instruction No. 1309 and Planning Report No. 8/2000.

7.2.2 New fresh water mains are proposed to connect each development site with the existing / new / upgraded fresh water supply network to meet their fresh water demand as summarized below:

Table 7.2 Proposed Fresh Water Mains Connections

Site	Mean Daily Fresh Water Demand (m^3/day)	Proposed Fresh Water Supply Connections	FWSR
SKI-1	2,044	New water mains along proposed access road and upgraded water mains along Wing Lai Road and Po Hong Road.	TKO West Low Level FWSR
SKI-2	1,324	Existing water mains at Ying Yip Road.	TKO West Low Level FWSR
SKI-6	462	Existing water mains at Chiu Shun Road.	TKO West Low Level FWSR
SKI-11	2,078	Existing water mains at Po Lam Road North.	TKO West Low Level FWSR
SKI-12	2,395	Existing water mains at Pak Shing Kok Road.	TKO East Low Level FWSR
Total	**8,303**	-	-

7.2.3 The total capacity of TKO West Low Level FWSR and TKO East Low Level FWSR is considered adequate to cope with the fresh water demand of the proposed developments. Minimum residual head requirement can be met for fresh water supply to all 5 development sites.

7.2.4 Existing fresh water mains are found to be in conflict with the proposed developments at Site SKI-1, these existing fresh water mains are proposed to be diverted along new access road or outside the site boundary.

7.2.5 New salt water mains are proposed to connect each development site with the existing / new / upgraded salt water supply network to meet their salt water demand as summarized below:

Table 7.3 Proposed Salt Water Mains Connections

Site	Mean Daily Salt Water Demand (m^3/day)	Proposed Salt Water Supply Connections	SWSR
SKI-1	813	New water mains along proposed access road and upgraded water mains along Wing Lai Road and Po Hong Road.	TKO West Low Level SWSR
SKI-2	351	New and existing water mains along Ying Yip Road.	TKO West Low Level SWSR
SKI-6	123	Existing water mains at Chiu Shun Road.	TKO West Low Level SWSR
SKI-11	550	Existing water mains at Po Lam Road North.	TKO West Low Level SWSR
SKI-12	634	Existing water mains at Pak Shing Kok Road.	TKO West Low Level SWSR
Total	**2,471**	-	-

7.2.6 The capacity of TKO West Low Level SWSR as well as the TKO SWPS is considered adequate to cope with the salt water demand of the proposed developments. Minimum residual pressure requirement cannot be met for salt water supply to the proposed development at Sites SKI-1, SKI-2 and SKI-12. Detailed network hydraulic assessment is recommended at the next stage of the Project. Possible mitigation measures such as provision of new salt water service reservoir / tank at higher elevation, uprating of existing TKO SWPS, provision of an intermediate booster pumping station can be considered on the basis of detailed network hydraulic assessment at the next stage.

7.2.7 In the light of the above, no insurmountable problem in respect of water supply is anticipated.

8 PRELIMINARY PUBLIC UTILITIES STUDY

8.1 Overview

8.1.1 Major utility undertakers have been consulted on their existing and planned public utilities within and in the vicinity of the five housing sites. No insurmountable problem in respect of public utility provision is anticipated.

8.2 Electricity Power

8.2.1 According to the as-built information provided by CLP, interface issues identified with the existing electricity power supply system include certain sections of existing CLP cables, which are located underneath proposed new junctions and widened/upgraded roads, may require to be lowered or diverted along new footpath to satisfy HyD's minimum cover requirement for utilities services.

8.2.2 Regarding the provision of power supply to the new development, existing electricity power cables (mostly 11kV and low voltage cables) are available in the vicinity of the five housing sites. As confirmed with CLP, there should be sufficient power sources at the power transmission voltage level of 132kV or above. For power distribution level of 11kV or below, extension of existing power distribution network and provision of suitable transformer rooms, cable ducts and draw pit systems would be required. The detailed area and location of the transformer rooms can only be determined when detailed information are available at the next stage of the Project.

8.2.3 The details of electricity supply, assessment on electricity demand and hence the need for substation are recommended to be further investigated and confirmed with CLP at the next stage of the Project.

8.3 Gas Supply

8.3.1 According to the as-built information provided by HKCG, the interface issues identified with the existing town gas supply system include certain sections of existing underground gas mains, which are located underneath proposed new junctions and widened/upgraded roads, may require to be lowered or diverted along new footpath to satisfy HyD's minimum cover requirement for utilities services.

8.3.2 As confirmed with HKCG, the existing gas supply network is capable to provide gas supply to the housing sites without any major upgrading works required.

8.3.3 The details of gas supply for the housing developments are recommended to be further investigated and confirmed with HKCG at the next stage of the Project.

8.4 Telecommunication

8.4.1 Based on the as-built information provided by HGC, HKBN and PCCW, the interface issues identified with the existing cables include certain sections of existing underground cables, which are located underneath proposed new junctions and widened/upgraded roads, may require to be lowered or diverted along new footpath to satisfy HyD's minimum cover requirement for utilities services.

8.4.2 Regarding provision of telecommunication service to the housing developments, telecommunication service cables are available in vicinity of the development sites, extension from the underground services to development should be feasible.

8.4.3 The details of proposed duct routes to the housing developments are recommended to be further investigated and confirmed with the telecommunication companies at the next stage of the Project.

9 PRELIMINARY ENVIRONMENTAL STUDY

9.1 Key Environmental Considerations

9.1.1 Preliminary Environmental Study has carried out to assess and evaluate the environmental impacts associated with the proposed site formation and infrastructural works of the development sites. The key environmental issues considered include air quality, noise, water quality, waste management, ecology, trees, cultural heritage, land contamination and landfill gas.

9.2 Preliminary Air Quality Assessment

9.2.1 Representative air sensitive receivers (ASRs) have been identified within 500m from the study areas. The potential air quality impacts that may arise during the construction and operation phases of the Project have been identified and assessed.

9.2.2 Through implementation of dust control measures as recommended in the Air Pollution Control (Construction Dust) Regulation as well as the Recommended Pollution Control Clauses for Construction Contracts, adverse construction dust impacts on the ASRs is not anticipated during construction phase. The major source of adverse air quality impact during operation phase is the vehicular emission from the induced traffic on nearby existing / proposed / upgraded roads. The preliminary findings on air quality impacts during operation phase are summarized below:

Table 9.1 Preliminary Findings on Air Quality Impacts during Operation Phase

Site	Nearby Roads	Type of Road	HKPSG Recommended Setback Distance for Active and Passive Recreational Uses	Horizontal Setback Distance from Road Kerb to nearest existing ASRs [1]
SKI-1	Proposed New Access Road	Local Distributor (LD)	>5m	>30m
SKI-2	Widened Ying Yip Road	Local Distributor (LD)	>5m	Buffer distances for the existing ASRs remain unchanged (i.e. Approx. 5m for Po Leung Kuk Ho Yuk Ching (1984) College)
SKI-6	Ngan O Road and Chiu Shun Road [2]	District Distributor (DD)	>10m	Buffer distances for the existing ASRs remain unchanged
SKI-11	Yau Yue Wan Village Road [2]	Local Distributor (LD)	>5m	Buffer distances for the existing ASRs remain unchanged
	Po Fung Road [2]	District Distributor (DD)	>10m	

Site	Nearby Roads	Type of Road	HKPSG Recommended Setback Distance for Active and Passive Recreational Uses	Horizontal Setback Distance from Road Kerb to nearest existing ASRs [1]
	Po Lam Road North [2]	Primary Distributors (PD)	>20m	
SKI-12	Wan Po Road and Pak Shing Kok Road [2]	Local Distributor (LD)	>5m	Buffer distances for the existing ASRs remain unchanged

Notes:
[1] Distance for sensitive receivers with active and passive recreational uses.
[2] No improvement work required on these roads.

An EAS will be conducted at the next stage of the Project to address the potential air quality impacts arising from each of the proposed developments. It is recommended that the designer at the next stage of the Project shall ensure the future building layout plan will be designed such that no air sensitive uses will be planned within the minimum buffer zone from the proposed access road / nearby existing roads as recommended in HKPSG. Given the minimum setback distance as stipulated in HKPSG is provided, adverse vehicular emission impacts are not anticipated.

A MTR Ventilation building is identified adjacent to Site SKI-6, the associated emission impact on the development shall be addressed in EAS at the next stage of the Project.

9.3 Preliminary Noise Assessment

9.3.1 Representative noise sensitive receivers (NSRs) have been identified within 300m from the study areas. The potential noise impacts that may arise during the construction and operation phases of the Project have been identified and assessed.

9.3.2 A broad-brush quantitative construction noise assessment has been carried out. It is concluded that through implementation of recommended practices and mitigation measures including good site practices, use of quality powered mechanical equipment, use of temporary noise barriers, noise enclosure and acoustic mat as well as scheduling of construction works, the construction noise levels could be mitigated to within the criterion and the proposed site formation and road works are unlikely to cause adverse impact on surrounding NSRs.

9.3.3 A broad-brush quantitative road traffic noise assessment has been carried out. The proposed housing development and associated road improvement works might induce additional traffic noise to the existing NSRs, but the changes in the noise levels after the proposed road works are less than 1.0dB(A). Hence, the noise impacts arising from the proposed housing development and the associated road works are considered insignificant. Adverse traffic noise impacts are also anticipated on the planned NSRs within all housing sites. Building setback, building deposition, orientation and layout design should be investigated and studied at the next stage of the Project. To reduce the impacts on the future housing site, it is also recommended to consider provision of noise barrier, low noise road surfacing (LNS) material, other at-source mitigation measures,

mitigation measures at receiver end, such as fixed glazing, architectural fins, acoustic windows and acoustic balcony or combination of them. All feasible mitigation measures and detailed noise impact assessment will be thoroughly considered and evaluated at the next stage of the Project.

9.4 Preliminary Water Quality Assessment

9.4.1 During the construction phase, potential water pollution sources have been identified including construction site runoff, sewage from site workforce and alteration of existing watercourses. Mitigation measures including provision of cut-off drains, installation of proper drainage systems and sedimentation tanks on-site etc. have been recommended to mitigate any potential water quality impacts. It is recommended that prior to the proposed alteration/diversion of watercourses and site formation works, the green channel/temporary channel shall be constructed and implemented so as to avoid and minimise adverse impacts on the existing watercourses.

9.4.2 Operational impacts associated with runoff and sewage from the development would be insignificant with proper management practices in place. The proposed development will be discharged to public sewerage system, and no adverse water quality impact is anticipated.

9.5 Preliminary Waste Assessment

9.5.1 The estimated major types and quantities of wastes to be generated during construction phase of site formation and associated infrastructural works have been preliminarily estimated and are summarized in **Table 9.2**. While other types of waste will be generated during construction phase, the amount of these waste are anticipated to be insignificant.

Table 9.2 Estimation of Waste Generation

Site	(i) Rock cut volume (m^3)	(ii) Soil cut volume (m^3)	(iii) Artificial hard materials and vegetation (m^3)	(iv) Total reuse (m^3)	(v) = (i) + (ii) + (iii) – (iv) Total volume of surplus material (m^3)
SKI-1	26,270	236,470	4,510	14,100	253,150
SKI-2	1,650	14,850	1,190	16,500	1,190
SKI-6	400	7,540	2,560	20	10,480
SKI-11	170,400	113,600	3,420	2,040	285,380
SKI-12	1,970	17,730	6,170	19,700	6,170
Total	**200,690**	**390,190**	**17,850**	**52,360**	**556,370**

Note : Values rounded to the nearest ten

9.5.2 Owing to the hilly topography of Sites SKI-1 and SKI-11, considerable amount of surplus material will be generated during site formation works at these two sites while Sites SKI-2, SKI-6 and SKI-12 will generate comparatively smaller amount of surplus material. Measures, including the opportunity for on-site sorting, reusing surplus materials etc., are devised in the construction methodology to minimise the surplus materials to be disposed. Recommendations have been made for implementation by the Contractor during the construction period to minimise waste generation and off-site disposal of each type of waste. Opportunity to reuse the surplus material should be further explored at the next stage of the Project.

9.5.3 During the operational phase, small amount of general refuse would be generated from the proposed infrastructural works. With the implementation of proper waste management procedures, there would be no significant environmental impact anticipated.

9.6 Preliminary Ecology Assessment

9.6.1 The five sites are mainly located within "Green Belt" Zone. Except the site at South of Chiu Shun Road which was previously used as temporary site office for government works project, the remaining four sites are undeveloped.

9.6.2 Preliminary ecological surveys have been conducted in the five housing sites and the surrounding area (i.e. 500m from boundary of the housing sites) from August to November 2015. On the basis of the survey results, the boundaries of the housing sites have been adjusted to avoid encroachment onto area with higher ecological value. The habitat maps of Sites SKI-1, SKI-2, SKI-11 and SKI-12 are as shown in **Drawings Nos. 242030/C/081, 082, 086 and 087**. Evaluation of ecological impacts for each housing sites are summarized in the table below:

Table 9.3 Evaluation of Potential Ecological Impacts

Site	**Evaluation of Impacts (Unmitigated)**			
SKI-1	Significance of Direct Impacts	Habitat	Secondary woodland – Moderate	
			Plantation – Low to Moderate	
			Semi-natural watercourse – Low to Moderate	
		Species of Conservation Concern	Floral	*Aquilaria sinensis (Common)* – Low to Moderate
				Pavetta hongkongensis (Common) – Low to Moderate
				Pyrenaria spectabilis(Restricted) – Low to Moderate
			Bird	*Greater Coucal (Common Resident)*– Low
				Collared Scops Owl (Common breeding Resident)– Low
				Rufous-capped Babbler (Locally scarce resident population of captive)– Low
	Significance of Indirect Impacts		Insignificant or Low	
SKI-2	Significance of Direct Impacts	Habitat	Secondary woodland – Low	
			Plantation – Low	
			Semi-natural watercourse – Low	
		Species of Conservation Concern	Floral	*Aquilaria sinensis (Common)*– Low to Moderate
				Gnetum luofuense (Common) – Low to Moderate
				Pavetta hongkongensis (Common) – Low to Moderate
				Diospyros vaccinioides(Common) – Low to Moderate
			Bird	*Black Kite (Locally abundant winter visitor and with a significant non-breeding population)* – Low
				Chinese Hwamei (Common breeding resident)– Low
	Significance of Indirect Impacts		Insignificant or Low	

Site	Evaluation of Impacts (Unmitigated)			
SKI-6	Significance of Direct Impacts		Insignificant	
	Significance of Indirect Impacts		Insignificant	
SKI-11	Significance of Direct Impacts	Habitat	Secondary woodland – Moderate	
			Plantation – Low	
		Species of Conservation Concern	Floral	*Aquilaria sinensis (Common)* – Low to Moderate
				Gnetum luofuense (Common) – Low
	Significance of Indirect Impacts		Insignificant or Low	
SKI-12	Significance of Direct Impacts	Habitat	Secondary woodland – Moderate to High	
			Grassland – Very Low	
		Species of Conservation Concern	Floral	*Aquilaria sinensis (Common)* – Low to Moderate
				Diospyros vaccinioides (Common) – Low to Moderate
				Gnetum luofuense(Common) – Low to Moderate
				Pavetta hongkongensis (Common) – Low to Moderate
				Ormosia pachycarpa (Restricted)– Moderate
	Significance of Indirect Impacts		Insignificant or Low	

9.6.3 Based on the results of preliminary ecological surveys, the five sites do not encroach onto any recognized site of conservation importance.

9.6.4 It is anticipated that secondary woodland of about 2.0ha, 1.7ha, 2.2ha and 1.8ha would be lost in Sites SKI-1, SKI-2, SKI-11 & SKI-12 respectively, rendering a total loss of secondary woodland of about 7.7 ha. The loss of secondary woodland shall be compensated by the replanting of native trees to form a woodland of a similar size. Preliminary locations of the potential woodland compensation areas in vicinity of the sites have been identified and shown in Drawing No. 242030/C/090. The affected flora species and faunal species of conservation importance will be transplanted or translocated to suitable receptor sites.

9.6.5 Use of green channels for re-provision of the affected/diverted watercourses should be considered at the next stage of the Project as far as practicable.

9.6.6 The ecological baseline study and the impact assessments focused on the footprint of the housing sites; hence the abovementioned findings are preliminary only. Detailed ecological surveys are recommended at the next stage of the Project with a view to formulating suitable mitigation measures so as to reduce the ecological impact as far as possible.

9.6.7 The actual location and size for woodland compensation will be formulated with further investigation at the next stage of the Project. The ecological impacts arising from the development will be mitigated with the implementation of the proposed woodland compensation, transplantation or translocation of the affected flora and fauna species of conservation importance and implementation of good site practices during construction phase.

9.6.8 Low residual impacts are anticipated after the implementation of these mitigation measures.

9.7 Preliminary Tree Assessment

9.7.1 A preliminary tree survey has been conducted to estimate the quantities of trees and to assess the form, health and condition of the trees within the site area. The preliminary tree survey was conducted in form of group survey due to considerable amount of trees within the housing sites.

9.7.2 No Registered Old and Valuable Tree (OVT) is identified within the housing sites. Results of the tree survey are summarized in the table below. Tree felling application and compensatory planting proposals will be submitted in accordance with *ETWB TCW No. 29/2004* and *DEVB TCW No. 7/2015* at the next stage of the Project.

Table 9.4 Summary of Tree Assessment Results

Site	Retain	Transplant	Fell	Total
SKI-1	376	61	4,227	**4,664**
SKI-2	260	55	1,667	**1,982**
SKI-6	1 (Important Tree)	0	59	**60**
SKI-11	170	40	3,360	**3,570**
SKI-12	5	0	5,775	**5,780**
Approximate Total	**812**	**156**	**15,088**	**16,056**

9.7.3 Approximately 15,088 trees are proposed to be felled and approx. 156 trees, which include rare and precious trees, are proposed to be transplanted. A *Ficus microcarpa* (榕樹) with diameter of about 2m is identified at Site SKI-6 and considered as an important tree. This tree is proposed to be retained.

9.8 Preliminary Cultural Heritage Assessment

9.8.1 No site of archaeological interest, declared monuments, graded historic buildings, proposed graded historic buildings, new items pending assessment by Antiquities Advisory Board and Government Historic Sites identified by Antiquities and Monuments Office are identified within 500m of Sites SKI-1 and SKI-12. The cultural heritage resource within 500m distance of the Sites SKI-2, SKI-6 and SKI-11 are summarized below:

Table 9.5 Summary Cultural Heritage Resources within 500m of the Housing Sites

Site	Nearest Cultural Heritage Resources
SKI-1	Nil
SKI-2	Yau Yue Wan Kiln Site of Archaeological Interest is located approximately 475m to the west of the site.
SKI-6	Grade 3 historic building Tin Hau Temple, Hang Hau is located approximately 85m to the northeast of the site.
SKI-11	Yau Yue Wan Kiln Site of Archaeological Interest which is located approximately 350m to the southeast of the site.
SKI-12	Nil

9.8.2 No impact on cultural heritage is anticipated during construction and operational phases of the housing sites.

9.9 Preliminary Land Contamination Assessment

9.9.1 On the basis of historical aerial photos and site reconnaissance, no land use associated with potential contamination is observed at the five housing sites. Hence, land contamination is not anticipated at these sites. Site reappraisal is recommended at the next stage of Project if there is any land use change associated with potential land contamination activities in the future.

9.10 Preliminary Landfill Gas Hazard Assessment

9.10.1 Sites SKI-1, SKI-2, SKI-6 and SKI-11 are outside consultation zone of landfills.

9.10.2 Site SKI-12 falls within the 250m consultation zone of Tseung Kwan O Stage I Landfill. Qualitative risk assessments of landfill gas hazard imposed to the Project has been undertaken. The results indicate that the overall risk level is "**Medium**" and appropriate protective measures including gas monitoring, active gas extraction system and building protection design measures are feasible mitigation measures to minimize the landfill gas risk for the Site SKI-12 during both the construction and operational phases. With appropriate mitigation measures, no adverse impact to the Site SKI-12 is anticipated during both the construction and operational phases.

10 PRELIMINARY LAND REQUIREMENT STUDY

10.1 Key Land Requirement Issues

10.1.1 Based on the land status plans obtained from Lands Department, the land uses that may be affected by the proposed development have been identified. Except two private land lots with total area of 195 m^2 within Site SKI-11, the remaining housing sites are all located on Government Lands. Land acquisition of these two private lots is required for development of Site SKI-11.

10.1.2 All proposed junction improvement works, drainage, sewerage, water supply and utilities works are anticipated to be confined within Government land and no land resumption of private land lots is required.

10.1.3 Certain sections of existing trails / footpaths / staircases will be affected by the proposed works and are required to be closed and/or re-provisioned. Existing graves, urns and temporary structures are identified within all housing sites except Site SKI-2 and SKI-6. Clearance / removal of such graves, urns and temporary structures are required.

10.1.4 The wayleave alignment of HKUST sewerage tunnel at Site SKI-11 has to be amended to suit the development at Site SKI-11.

10.1.5 Sites SKI-6 and SKI-12 encroach upon the MTRC Railway Protection Boundary. The proposed construction works within the protection boundary shall comply with relevant guidelines and control criteria in respect of railway protection.

11 CONCLUSION

11.1 Conclusion of the Assignment

11.1.1 The Assignment has included preliminary technical assessments on geotechnical, site formation, natural terrain hazard, traffic and transport, drainage, sewerage, water supply, utilities, environmental (air quality, noise, water quality, waste, ecology, trees, cultural heritage, land contamination and landfill gas hazard).

11.1.2 With implementation of the proposed and planned infrastructural works, no insurmountable technical problem is anticipated for development of the five housing sites. The five housing sites are technically feasible for development without generating unacceptable adverse impacts to the surrounding area. A 4-month preliminary ecological survey has been conducted to assess the ecological value of the housing sites. On the basis of preliminary ecological survey, the site boundaries of the housing sites have been adjusted to avoid encroachment upon the area with higher ecological value. Detailed ecological surveys are recommended at the next stage of the Project with a view to formulating suitable mitigation measures so as to reduce the ecological impact as far as possible.

11.1.3 The feasibility of the development of the five housing sites has been assessed, and no insurmountable technical problem is anticipated.

Drawings

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LEGEND:

- NINE TKO HOUSING SITES

Rev	Description	By	Date

Consultant

ARUP

Contract No. and Title

Agreement No. CE 61/2014 (CE)

Site Formation and Infrastructural Works for Nine Housing Sites in Tseung Kwan O - Feasibility Study

Drawing title

INDICATIVE LOCATIONS OF NINE POTENTIAL HOUSING SITES IN TSEUNG KWAN O

Drawing no.			Rev.
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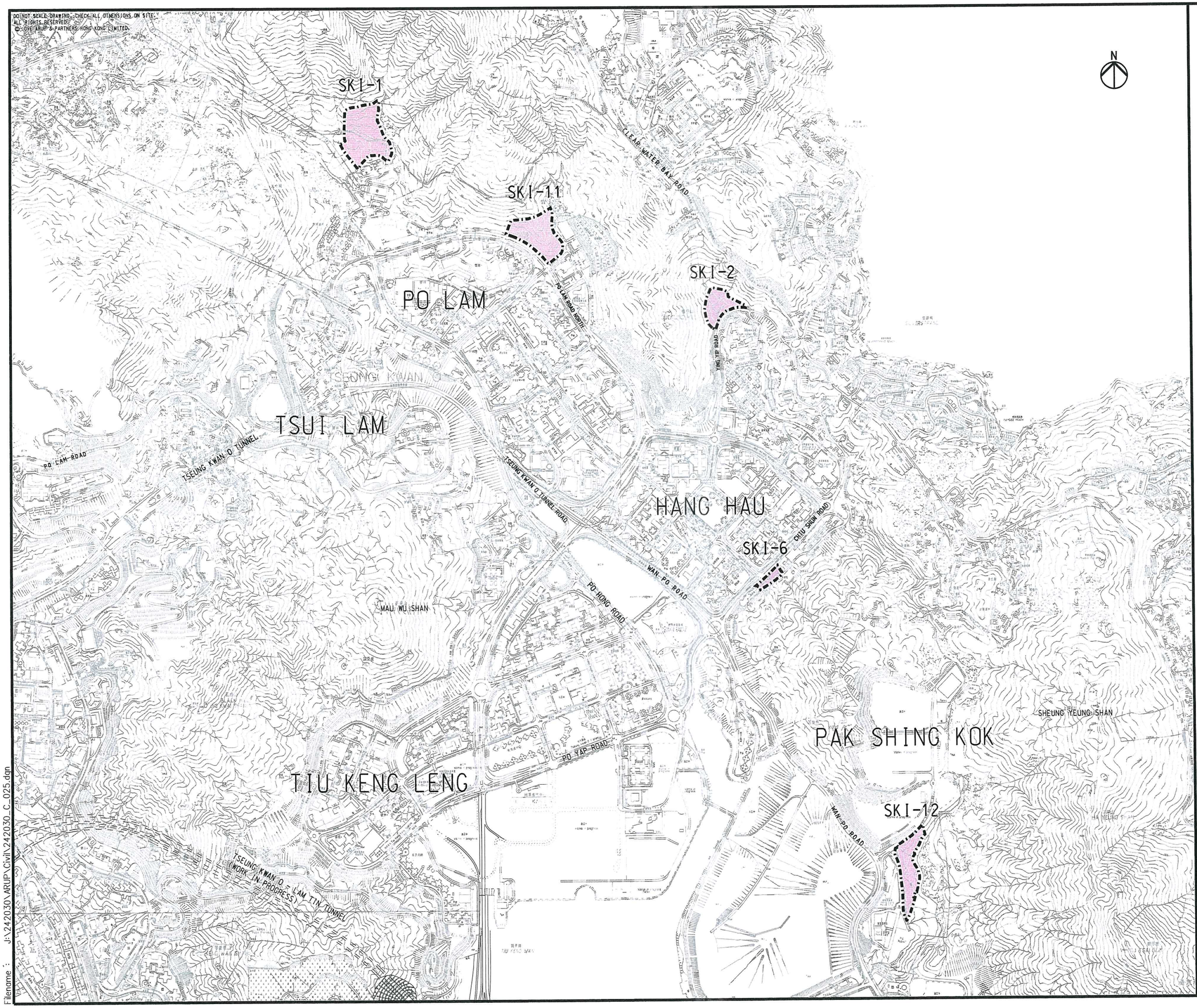

LEGEND:

INITIAL INDICATIVE LAYOUT OF FIVE TKO HOUSING SITES

Rev	Description	By	Date

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Contract No. and Title

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Site Formation and Infrastructural Works for Nine Housing Sites in Tseung Kwan O - Feasibility Study

Drawing title

LOCATION PLAN OF FIVE POTENTIAL HOUSING SITES IN TSEUNG KWAN O (PHASE 1 DEVELOPMENT)

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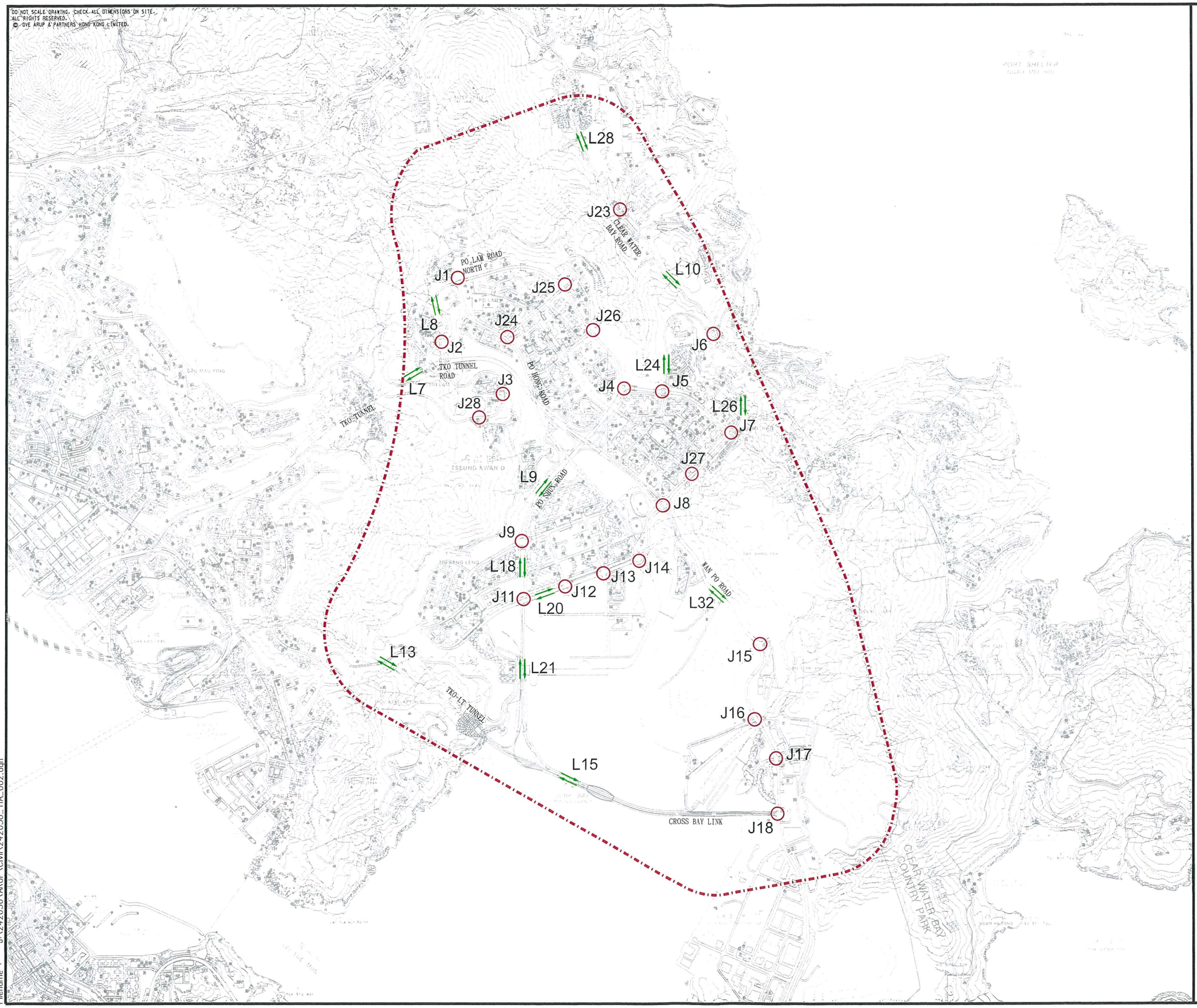

LEGEND:

- AREA OF INFLUENCE
- TKO-J15 — KEY JUNCTION
- L15 — KEY ROAD LINK

Rev	Description	By	Date

Consultant
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Contract No. and Title
Agreement No. CE 61/2014 (CE)
Site Formation and Infrastructural Works for Nine Housing Sites in Tseung Kwan O - Feasibility Study

Drawing title
AREA OF INFLUENCE, KEY JUNCTIONS & KEY ROAD LINKS

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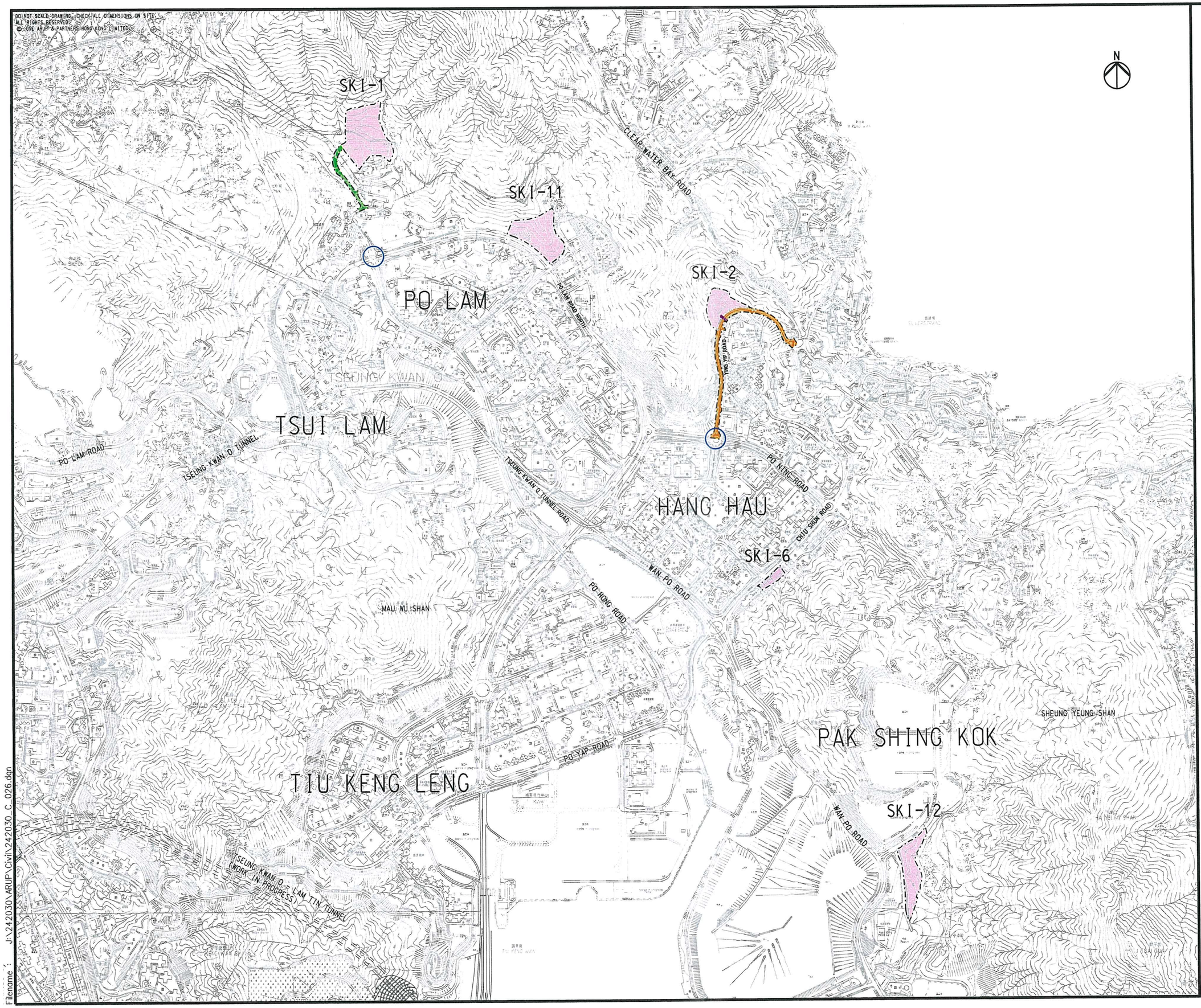

LEGEND:

- INITIAL INDICATIVE LAYOUT OF FIVE TKO HOUSING SITES
- PROPOSED ACCESS ROAD
- PROPOSED WIDENING WORKS OF EXISTING ROAD
- PROPOSED JUNCTION IMPROVEMENT WORKS
- PROPOSED FOOTBRIDGE

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Contract No. and Title

Agreement No. CE 61/2014 (CE)
Site Formation and Infrastructural Works for Nine Housing Sites in Tseung Kwan O - Feasibility Study

Drawing title

PROPOSED TRAFFIC IMPROVEMENT WORKS - LOCATION PLAN

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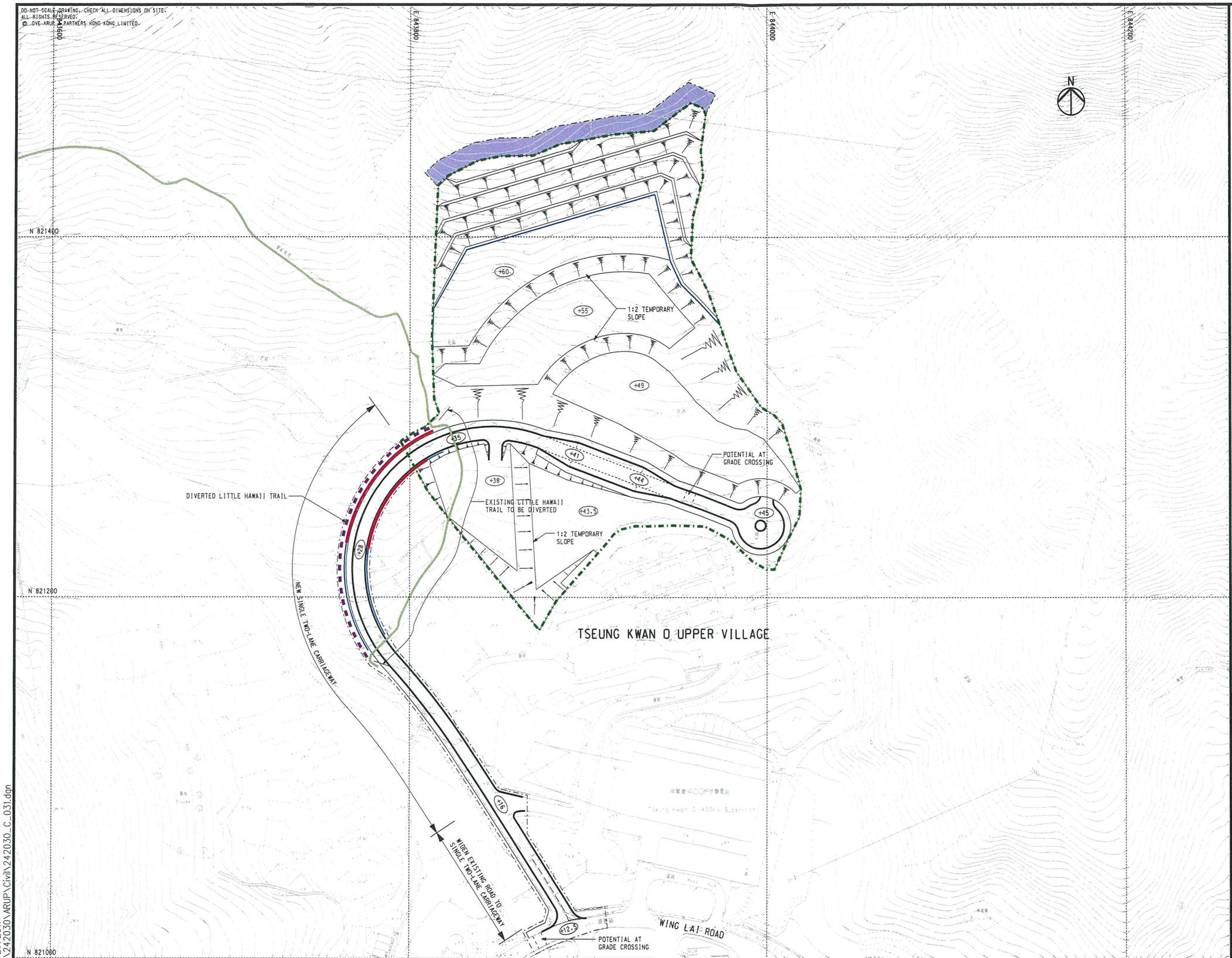

LEGEND:

- BOUNDARY FOR SITE FORMATION AND INFRASTRUCTURAL WORKS
- INDICATIVE LAYOUT OF HOUSING SITE
- PROPOSED L-SHAPED RC RETAINING WALL OR CANTILEVER SOLDIER PILE WALL (MAX. RETAINING HEIGHT OF 10m)
- PROPOSED BORED PILE WALL (MAX. RETAINING HEIGHT OF 22m)
- PROPOSED 1:1 CUT SLOPE
- PROPOSED 1:2 FILL SLOPE
- NATURAL TERRAIN HAZARD MITIGATION MEASURE
- (+45) PROPOSED PLATFORM LEVEL IN mPD.

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Agreement No. CE 61/2014 (CE)

Site Formation and Infrastructural Works for Nine Housing Sites in Tseung Kwan O - Feasibility Study

Drawing title

PROPOSED SITE FORMATION SCHEME AT SITE SKI-1

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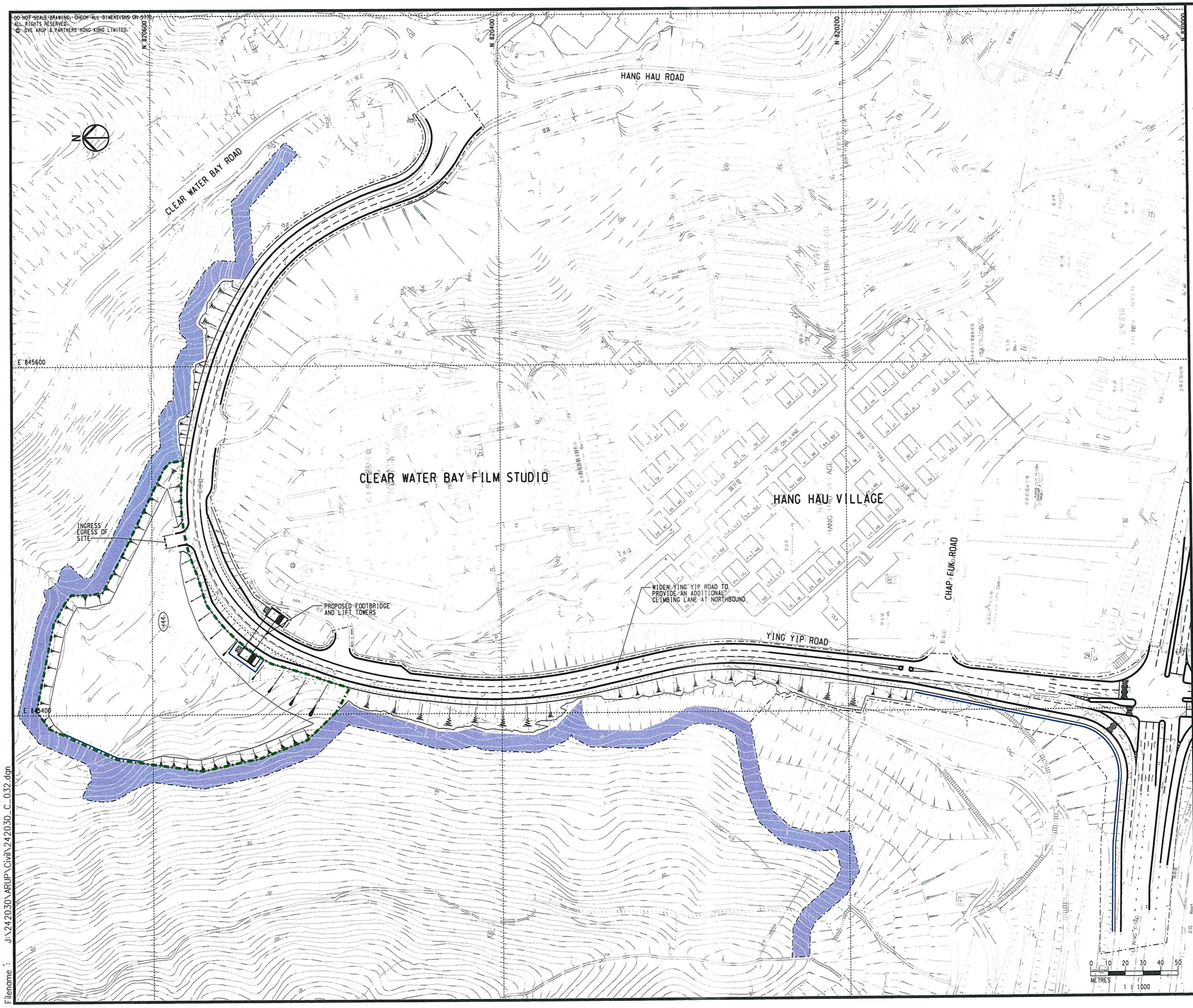

LEGEND:

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- PROPOSED 1:2 FILL SLOPE
- NATURAL TERRAIN HAZARD MITIGATION MEASURE
- (+45) PROPOSED PLATFORM LEVEL IN mPD.

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Site Formation and Infrastructural Works for Nine Housing Sites in Tseung Kwan O - Feasibility Study

Drawing title

PROPOSED SITE FORMATION SCHEME AT SITE SKI-2

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N

YUK MING COURT
NGAN O ROAD
LA CITE NOBLE
CHIU SHUN ROAD
WAN PO ROAD
Sports Ground

IMPORTANT TREE
FICUS MICROCARPA
TO BE RETAINED
INGRESS / EGRESS OF SITE
EXISTING HIGH-MAST POLE TO BE RELOCATED
+7.0
EXISTING STAIRCASE TO BE DEMOLISHED
EXISTING FOOTPATH TO BE RETAINED
STAIRCASE TO BE REPROVISIONED
MTR PROTECTION BOUNDARY

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METRES
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LEGEND:

- BOUNDARY FOR SITE FORMATION AND INFRASTRUCTURAL WORKS
- INDICATIVE LAYOUT OF HOUSING SITE
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- PROPOSED 1:2 FILL SLOPE
- NATURAL TERRAIN HAZARD MITIGATION MEASURE
- +45 PROPOSED PLATFORM LEVEL IN mPD.

Rev	Description	By	Date

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Contract No. and Title
Agreement No. CE 61/2014 (CE)
Site Formation and Infrastructural Works for Nine Housing Sites in Tseung Kwan O - Feasibility Study

Drawing title
PROPOSED SITE FORMATION SCHEME AT SITE SKI-6

Drawing no.			Rev.
242030/C/036			-
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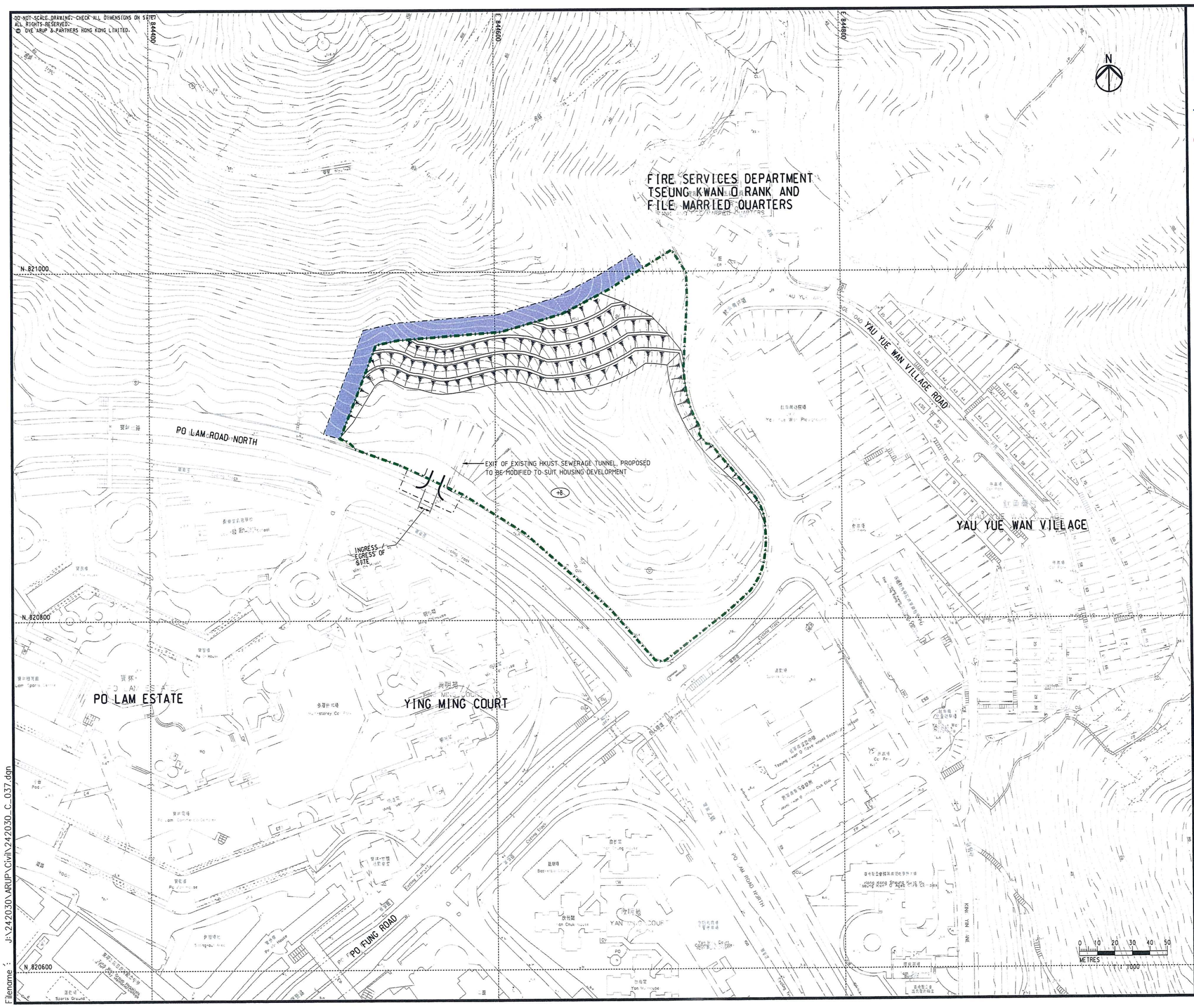

LEGEND:

- BOUNDARY FOR SITE FORMATION AND INFRASTRUCTURAL WORKS
- INDICATIVE LAYOUT OF HOUSING SITE
- PROPOSED L-SHAPED RC RETAINING WALL OR CANTILEVER SOLDIER PILE WALL (MAX. RETAINING HEIGHT OF 10m)
- PROPOSED BORED PILE WALL (MAX. RETAINING HEIGHT OF 22m)
- PROPOSED 1:1 CUT SLOPE
- PROPOSED 1:2 FILL SLOPE
- NATURAL TERRAIN HAZARD MITIGATION MEASURE
- +45 PROPOSED PLATFORM LEVEL IN mPD.

Rev	Description	By	Date

Consultant

ARUP

Contract No. and Title

Agreement No. CE 61/2014 (CE)

Site Formation and Infrastructural Works for Nine Housing Sites in Tseung Kwan O - Feasibility Study

Drawing title

PROPOSED SITE FORMATION SCHEME AT SITE SKI-11

Drawing no.			Rev.
242030/C/037			-
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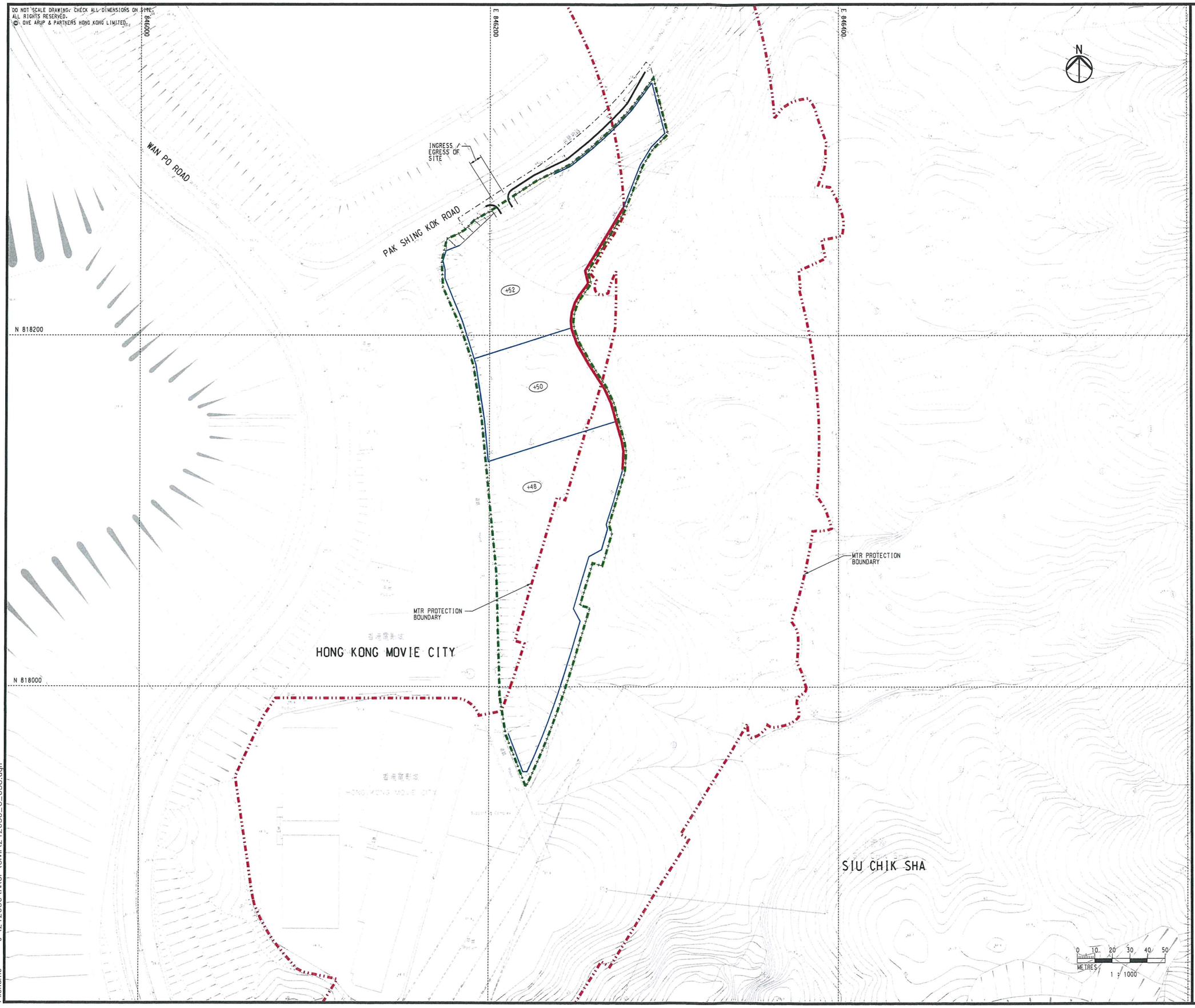

LEGEND:

- BOUNDARY FOR SITE FORMATION AND INFRASTRUCTURAL WORKS
- INDICATIVE LAYOUT OF HOUSING SITE
- PROPOSED L-SHAPED RC RETAINING WALL OR CANTILEVER SOLDIER PILE WALL (MAX. RETAINING HEIGHT OF 10m)
- PROPOSED BORED PILE WALL (MAX. RETAINING HEIGHT OF 22m)
- PROPOSED 1:1 CUT SLOPE
- PROPOSED 1:2 FILL SLOPE
- NATURAL TERRAIN HAZARD MITIGATION MEASURE
- (+45) PROPOSED PLATFORM LEVEL IN mPD.

Rev	Description	By	Date

Consultant

ARUP

Contract No. and Title

Agreement No. CE 61/2014 (CE)

Site Formation and Infrastructural Works for Nine Housing Sites in Tseung Kwan O - Feasibility Study

Drawing title

PROPOSED SITE FORMATION SCHEME AT SITE SKI-12

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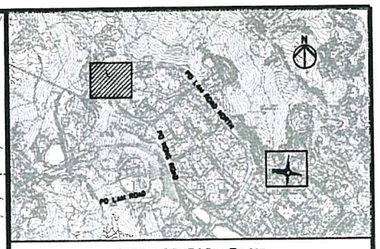
E 843900
E 844000
E 844100
N 820900
N 820800
N 820700

REMOVE EXISTING PLANTER FOR WIDENING PO HONG ROAD SOUTHBOUND FROM 1 TRAFFIC LANE TO 2 TRAFFIC LANES

PO HONG ROAD
PO LAM ROAD NORTH
PO LAM LANE
Cycling Track
Footba Field
Playground
CLP Power Hong Kong Limited
Po Lam Substation



KEY LOCATION PLAN

LEGEND:

- JUNCTION IMPROVEMENT WORKS BOUNDARY
- PROPOSED RETAINING WALL
- PROPOSED 1:1 CUT SLOPE
- (+45) PROPOSED PLATFORM LEVEL IN mPD.

Rev	Description	By	Date

Consultant
ARUP

Contract No. and Title
Agreement No. CE 61/2014 (CE)
Site Formation and Infrastructural Works for Nine Housing Sites in Tseung Kwan O - Feasibility Study

Drawing title
PROPOSED JUNCTION IMPROVEMENT SCHEME AT J/O PO LAM ROAD NORTH AND PO HONG ROAD

Drawing no.			Rev.
242030/C/042			-
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E 845300

E 845500

N 820100

N 820000

YING YIP ROAD

CHAP FUK ROAD

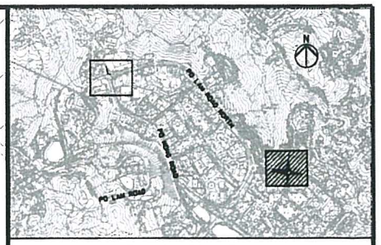
PEDESTRIAN CROSSING

CONVERT ROUNDABOUT AT PO NING ROAD / SHEUNG NING ROAD / YING YIP ROAD TO A SIGNALISED JUNCTION

PO NING ROAD

SHEUNG NING ROAD

HAU TAK ESTATE



KEY LOCATION PLAN

LEGEND:

- JUNCTION IMPROVEMENT WORKS BOUNDARY
- PROPOSED RETAINING WALL
- PROPOSED 1:1 CUT SLOPE
- (+45) PROPOSED PLATFORM LEVEL IN mPD.

Rev	Description	By	Date

Consultant

ARUP

Contract No. and Title

Agreement No. CE 61/2014 (CE)
Site Formation and Infrastructural Works for Nine Housing Sites in Tseung Kwan O - Feasibility Study

Drawing title

PROPOSED JUNCTION IMPROVEMENT SCHEME AT J/O PO NING ROAD, YING YIP ROAD AND SHEUNG NING ROAD

Drawing no.			Rev.
242030/C/043			-
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SYU	11/16	KC	SYC
Scale		Status	
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E 843600
E 843800
E 844000
E 844200
N 821400
N 821200
N 821000

N

+60
+55
+49
+35
+41
+44
+38
+43.5
+45

DN450
DN15"
DN600
DN300
DN225
DN150
DN100

WING LAI ROAD
POWERING ROAD
CELLS 300x2900
Tseung Kwan O 400kV Substation
TSEUNG KWAN O VILLAGE
MATCH LINE
MATCH LINE

PROPOSED UPGRADING OF EXISTING DN80 / DN100 SALT WATER MAINS TO DN200 SALT WATER MAINS
PROPOSED UPGRADING OF EXISTING DN150 FRESH WATER MAINS TO DN375 FRESH WATER MAINS
PROPOSED CONNECTION TO EXISTING DN200 SALT WATER MAIN
PROPOSED CONNECTION TO EXISTING DN600 FRESH WATER MAIN

0 10 20 30 40 50
METRES
1:1000

LEGEND:

- BOUNDARY FOR SITE FORMATION AND INFRASTRUCTURAL WORKS
- EXISTING LAND BOUNDARIES
- EXISTING STORMWATER DRAIN & MANHOLE
- PROPOSED STORMWATER DRAIN & MANHOLE / CHANNEL
- EXISTING STORMWATER DRAIN TO BE DEMOLISHED
- PROPOSED STREAM DIVERSION
- EXISTING STREAM / CHANNEL TO BE DIVERTED
- EXISTING SEWER & MANHOLE
- EXISTING SEWER TO BE DEMOLISHED
- EXISTING SEWER TO BE UPGARDED
- PROPOSED SEWER & MANHOLE
- PROPOSED SEWER & MANHOLE (BY OTHERS)
- EXISTING FRESH WATER MAIN
- EXISTING SALT WATER MAIN
- PROPOSED FRESH WATER MAIN
- PROPOSED SALT WATER MAIN
- EXISTING FRESH WATER MAIN TO BE ABANDONED
- EXISTING SALT WATER MAIN TO BE ABANDONED

Rev	Description	By	Date

Consultant
ARUP

Contract No. and Title
Agreement No. CE 61/2014 (CE)
Site Formation and Infrastructural Works for Nine Housing Sites in Tseung Kwan O - Feasibility Study

Drawing title
EXISTING UTILITIES, PROPOSED UTILITIES AND LAND BOUNDARY AT SITE SKI-1

Drawing no.			Rev.
242030/C/061			-
Drawn	Date	Checked	Approved
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Scale		Status	
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N 820600
N 820400
N 820200
E 845600
E 845400

PROPOSED TRAPEZOIDAL GREEN CHANNEL B=1.2m, H=1.2m (APPROX. 280m IN LENGTH)

PROPOSED CONNECTION FOR SITE SKI-2

EXISTING 1500mm STORMWATER DRAIN TO BE ABANDONED

EXISTING STREAM BEING AFFECTED (APPROX. 360m IN LENGTH)

MATCH LINE A-A

MATCH LINE A-A

LEGEND:

- BOUNDARY FOR SITE FORMATION AND INFRASTRUCTURAL WORKS
- EXISTING LAND BOUNDARIES
- EXISTING STORMWATER DRAIN & MANHOLE
- PROPOSED STORMWATER DRAIN & MANHOLE / CHANNEL
- EXISTING STORMWATER DRAIN TO BE DEMOLISHED
- PROPOSED STREAM DIVERSION
- EXISTING STREAM / CHANNEL TO BE DIVERTED
- EXISTING SEWER & MANHOLE
- EXISTING SEWER TO BE DEMOLISHED
- EXISTING SEWER TO BE UPGARDED
- PROPOSED SEWER & MANHOLE
- PROPOSED SEWER & MANHOLE (BY OTHERS)
- EXISTING FRESH WATER MAIN
- EXISTING SALT WATER MAIN
- PROPOSED FRESH WATER MAIN
- PROPOSED SALT WATER MAIN
- EXISTING FRESH WATER MAIN TO BE ABANDONED
- EXISTING SALT WATER MAIN TO BE ABANDONED

0 10 20 30 40 50
METRES
1 : 1000

Rev	Description	By	Date

Consultant

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Contract No. and Title

Agreement No. CE 61/2014 (CE)
Site Formation and Infrastructural Works for Nine Housing Sites in Tseung Kwan O - Feasibility Study

Drawing title

EXISTING UTILITIES, PROPOSED UTILITIES AND LAND BOUNDARY AT SITE SKI-2

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E 845400

E 845800

N 819600

N 819200

N

SEWERAGE RESERVE FOR EXISTING 2250 DIA. SEWER

POTENTIAL OVT FICUS MICROCARPA

INGRESS / EGRESS OF SITE

3.5m FOOTPATH

EXISTING HIGH-MAST POLE TO BE RELOCATED

EXISTING STAIRCASE TO BE DEMOLISHED

EXISTING FOOTPATH TO BE RETAINED

STAIRCASE TO BE REPROVISIONED

MTR PROTECTION BOUNDARY

2400(H) x 2400(W) SEWAGE CHANNEL

4 CELLS 3500x3200 B.C.

3 CELLS 1500x1200 B.C.

0 10 20 30 40 50
METRES
1 : 1000

LEGEND:

- BOUNDARY FOR SITE FORMATION AND INFRASTRUCTURAL WORKS
- EXISTING LAND BOUNDARIES
- EXISTING STORMWATER DRAIN & MANHOLE
- PROPOSED STORMWATER DRAIN & MANHOLE / CHANNEL
- EXISTING STORMWATER DRAIN TO BE DEMOLISHED
- PROPOSED STREAM DIVERSION
- EXISTING STREAM / CHANNEL TO BE DIVERTED
- EXISTING SEWER & MANHOLE
- EXISTING SEWER TO BE DEMOLISHED
- EXISTING SEWER TO BE UPGARDED
- PROPOSED SEWER & MANHOLE
- PROPOSED SEWER & MANHOLE (BY OTHERS)
- EXISTING FRESH WATER MAIN
- EXISTING SALT WATER MAIN
- PROPOSED FRESH WATER MAIN
- PROPOSED SALT WATER MAIN
- EXISTING FRESH WATER MAIN TO BE ABANDONED
- EXISTING SALT WATER MAIN TO BE ABANDONED

Rev	Description	By	Date

Consultant

ARUP

Contract No. and Title

Agreement No. CE 61/2014 (CE)
Site Formation and Infrastructural Works for Nine Housing Sites in Tseung Kwan O - Feasibility Study

Drawing title

EXISTING UTILITIES, PROPOSED UTILITIES AND LAND BOUNDARY AT SITE SK1-6

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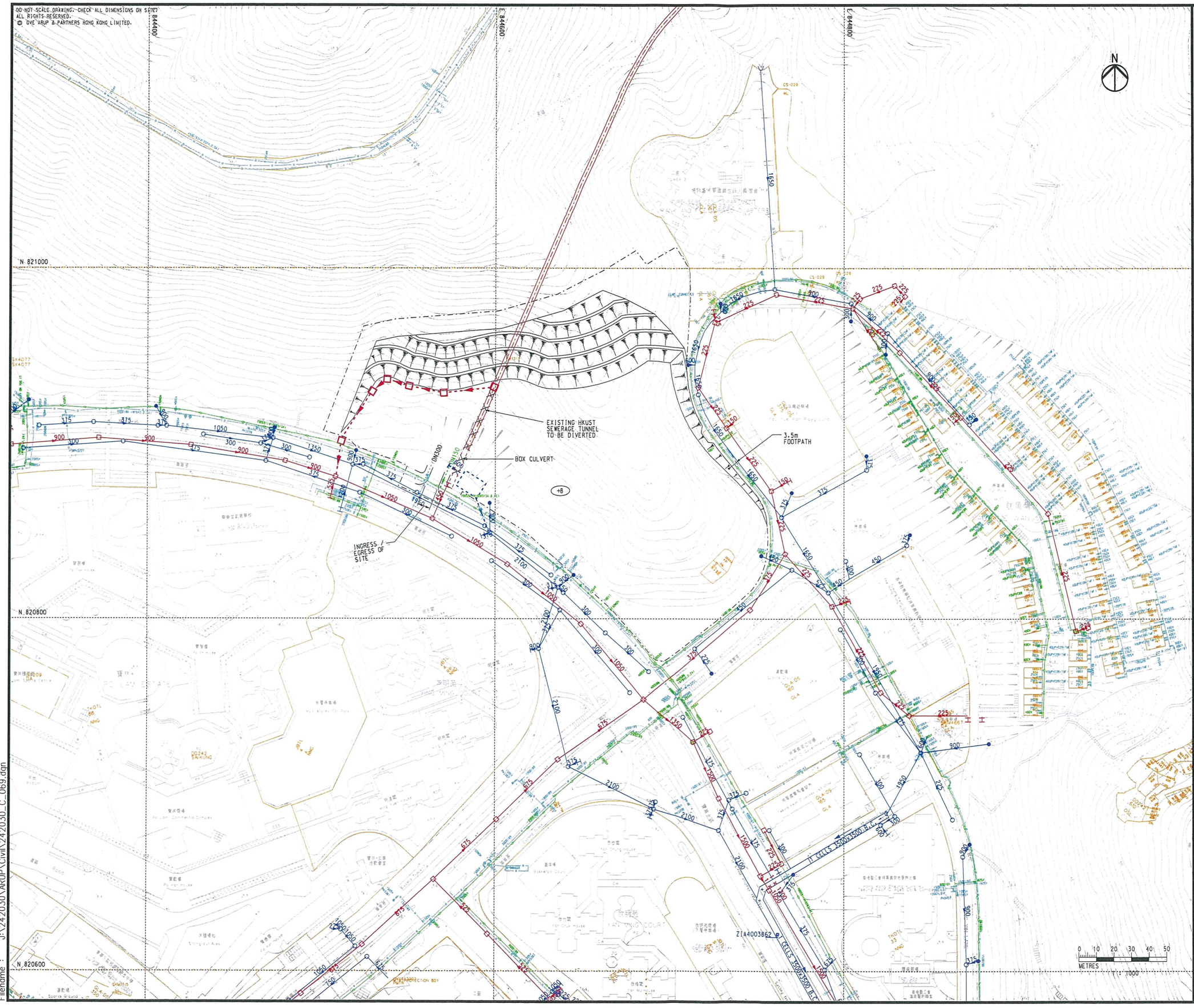

LEGEND:

- BOUNDARY FOR SITE FORMATION AND INFRASTRUCTURAL WORKS
- EXISTING LAND BOUNDARIES
- EXISTING STORMWATER DRAIN & MANHOLE
- PROPOSED STORMWATER DRAIN & MANHOLE / CHANNEL
- EXISTING STORMWATER DRAIN TO BE DEMOLISHED
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- EXISTING STREAM / CHANNEL TO BE DIVERTED
- EXISTING SEWER & MANHOLE
- EXISTING SEWER TO BE DEMOLISHED
- EXISTING SEWER TO BE UPGARDED
- PROPOSED SEWER & MANHOLE
- PROPOSED SEWER & MANHOLE (BY OTHERS)
- EXISTING FRESH WATER MAIN
- EXISTING SALT WATER MAIN
- PROPOSED FRESH WATER MAIN
- PROPOSED SALT WATER MAIN
- EXISTING FRESH WATER MAIN TO BE ABANDONED
- EXISTING SALT WATER MAIN TO BE ABANDONED

Rev	Description	By	Date

Consultant

ARUP

Contract No. and Title

Agreement No. CE 61/2014 (CE)

Site Formation and Infrastructural Works for Nine Housing Sites in Tseung Kwan O - Feasibility Study

Drawing title

EXISTING UTILITIES, PROPOSED UTILITIES AND LAND BOUNDARY AT SITE SKI-11

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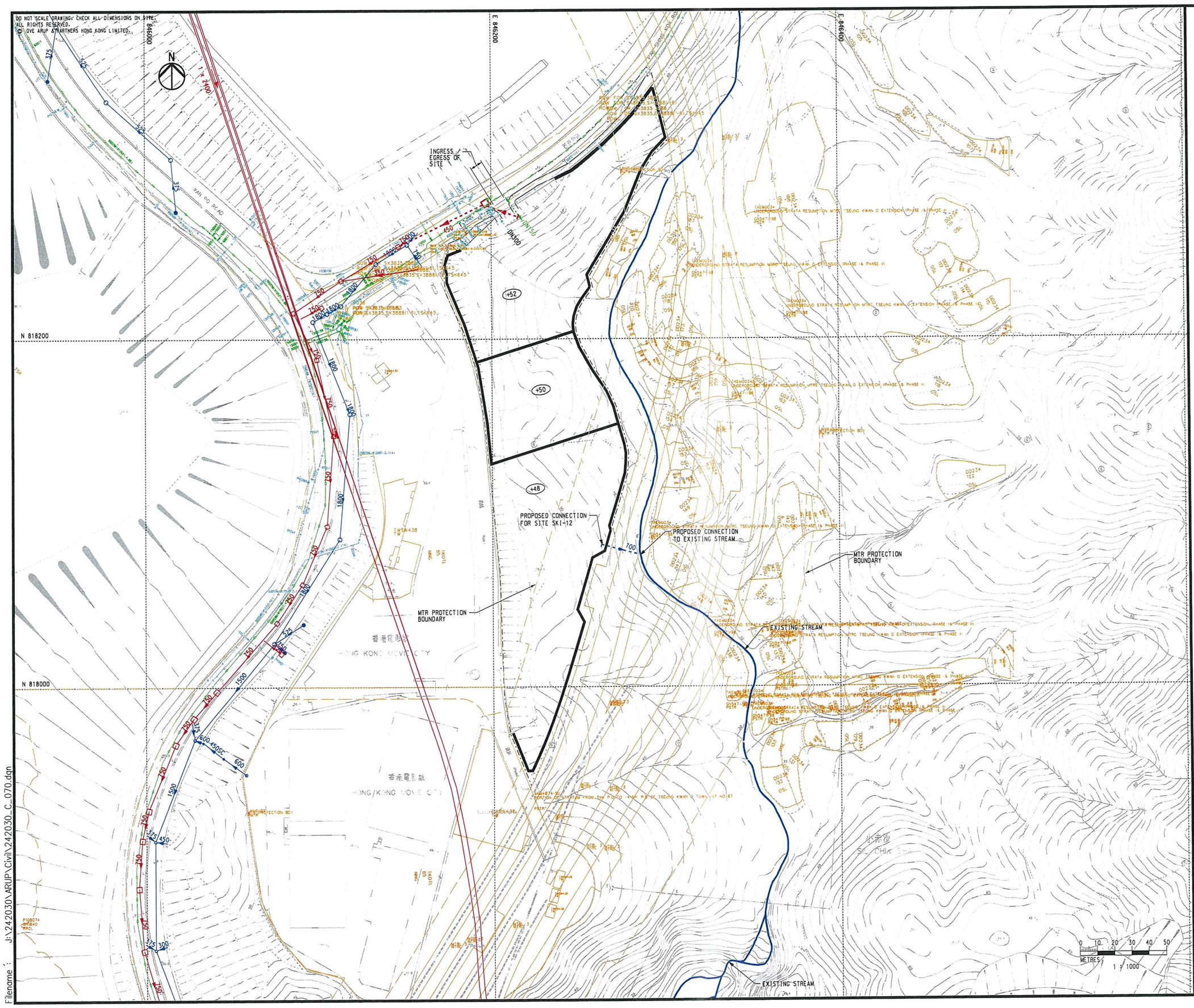

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- PROPOSED STORMWATER DRAIN & MANHOLE / CHANNEL
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- PROPOSED FRESH WATER MAIN
- PROPOSED SALT WATER MAIN
- EXISTING FRESH WATER MAIN TO BE ABANDONED
- EXISTING SALT WATER MAIN TO BE ABANDONED

Rev	Description	By	Date

Consultant

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Contract No. and Title

Agreement No. CE 61/2014 (CE)

Site Formation and Infrastructural Works for Nine Housing Sites in Tseung Kwan O - Feasibility Study

Drawing title

EXISTING UTILITIES, PROPOSED UTILITIES AND LAND BOUNDARY AT SITE SKI-12

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242030/C/070			-
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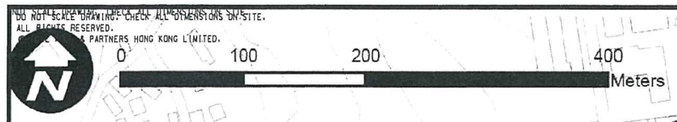

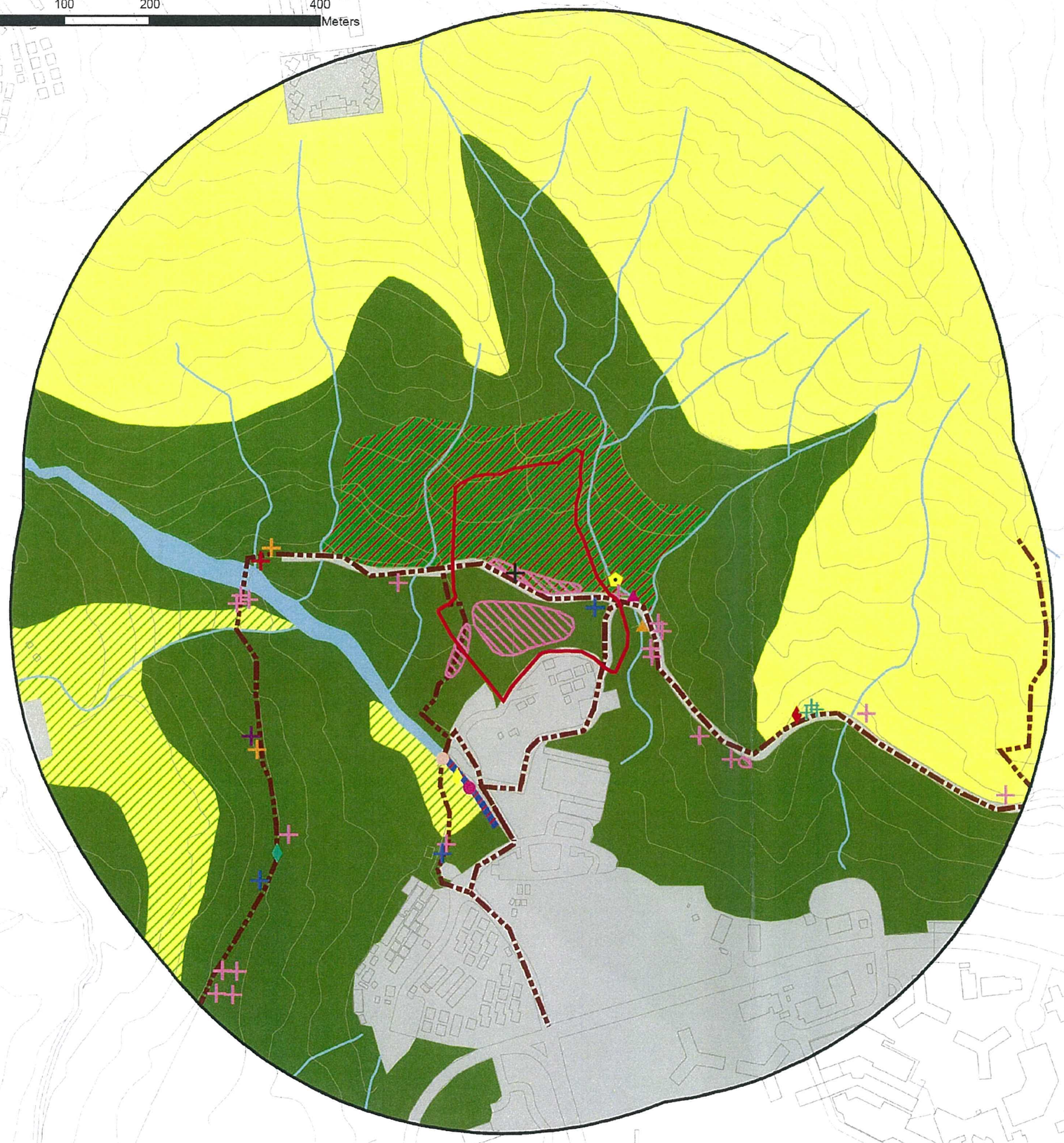

- 500m Study Area
- Project Area
- Survey Transect
- Channelised Watercourse
- Semi - natural Watercourse
- Grassland/ Shrubland
- Shrubland
- Secondary Woodland
- Plantation
- Developed Area

Species of Conservation Importance

Plants
- *Aquilaria sinensis*
- *Cibotium barometz*
- *Diospyros vaccinioides*
- *Gnetum luofuense*
- *Pavetta hongkongensis*
- *Pyrenaria spectabilis*
- *Rhododendron sp.*
- Area of *Aquilaria sinensis*

Butterflies
- Forget-me-not
- Common Birdwing
- Grass Demon

Dragonflies
- Chinese Yellowface

Freshwater Fish
- Predaceous Chub
- Giant Mottled Eel

Aquatic Invertebrates
- *Cryptopotamon anacoluthon*
- *Nanhaipotamon hongkongense*

Rev	Description	By	Date

Consultant
ARUP

Contract No. and Title
Agreement No. CE 61/2014 (CE)
Site Formation and Infrastructural Works for Nine Housing Sites in Tseung Kwan O - Feasibility Study

Drawing title
HABITAT MAP OF SITE SKI-1

Drawing no.	Rev.
242030/C/081	-

Drawn	Date	Checked	Approved
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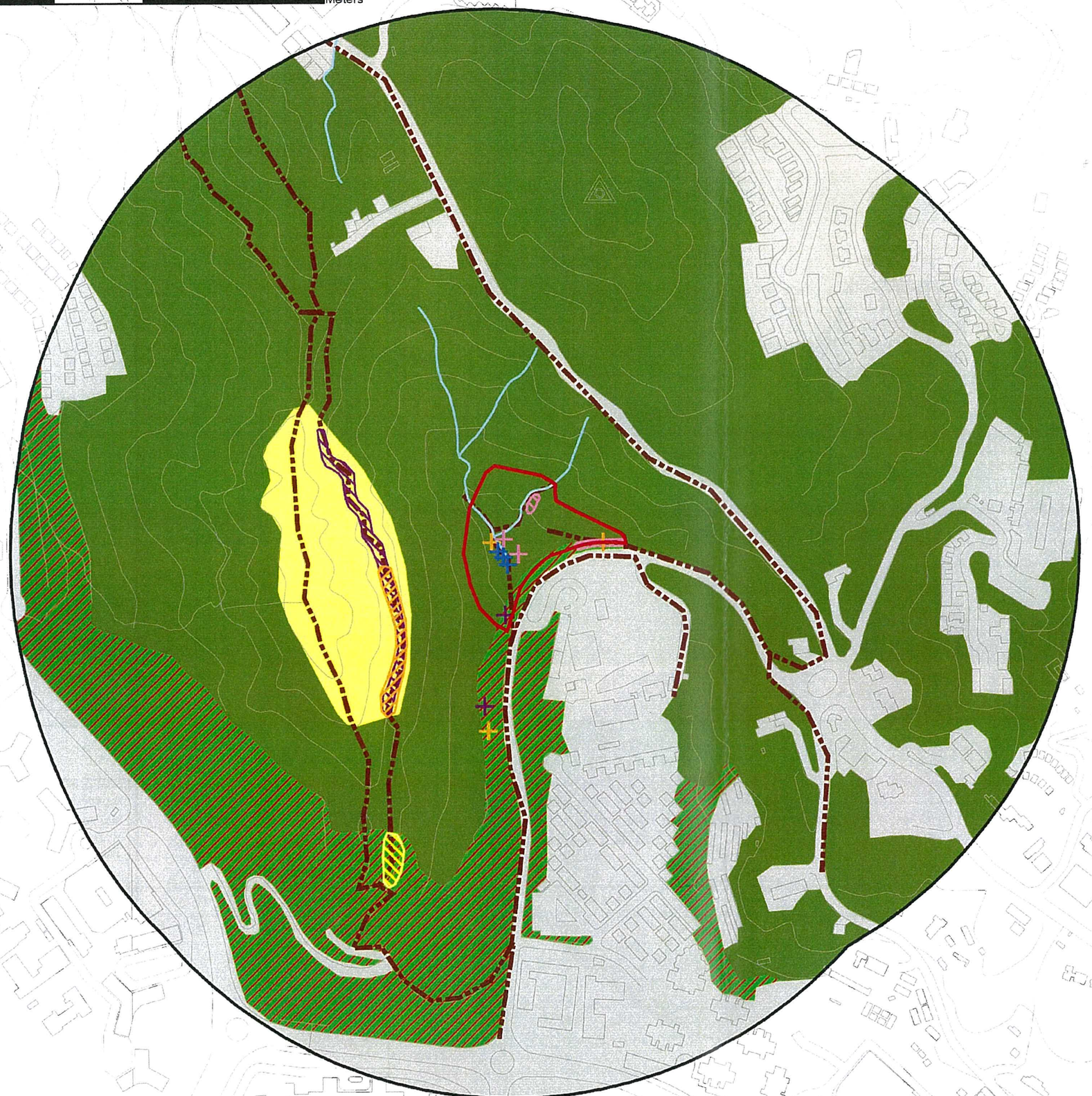

- Project Area
- 500m Study Area
- Semi - natural Watercourse
- Survey Transect
- Shrubland
- Secondary Woodland
- Plantation
- Developed Area

Species of Conservation Importance

Plants

- *Aquilaria sinensis*
- *Diospyros vaccinioides*
- *Gnetum luofuense*
- *Pavetta hongkongensis*
- Area of *Aquilaria sinensis*
- Area of *Diospyros vaccinioides*
- Area of *Gnetum luofuense*
- Area of *Keteleeria fortunei*

Rev	Description	By	Date

Consultant

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Contract No. and Title

Agreement No. CE 61/2014 (CE)

Site Formation and Infrastructural Works for Nine Housing Sites in Tseung Kwan O - Feasibility Study

Drawing title

HABITAT MAP OF SITE SKI-2

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242030/C/082			-
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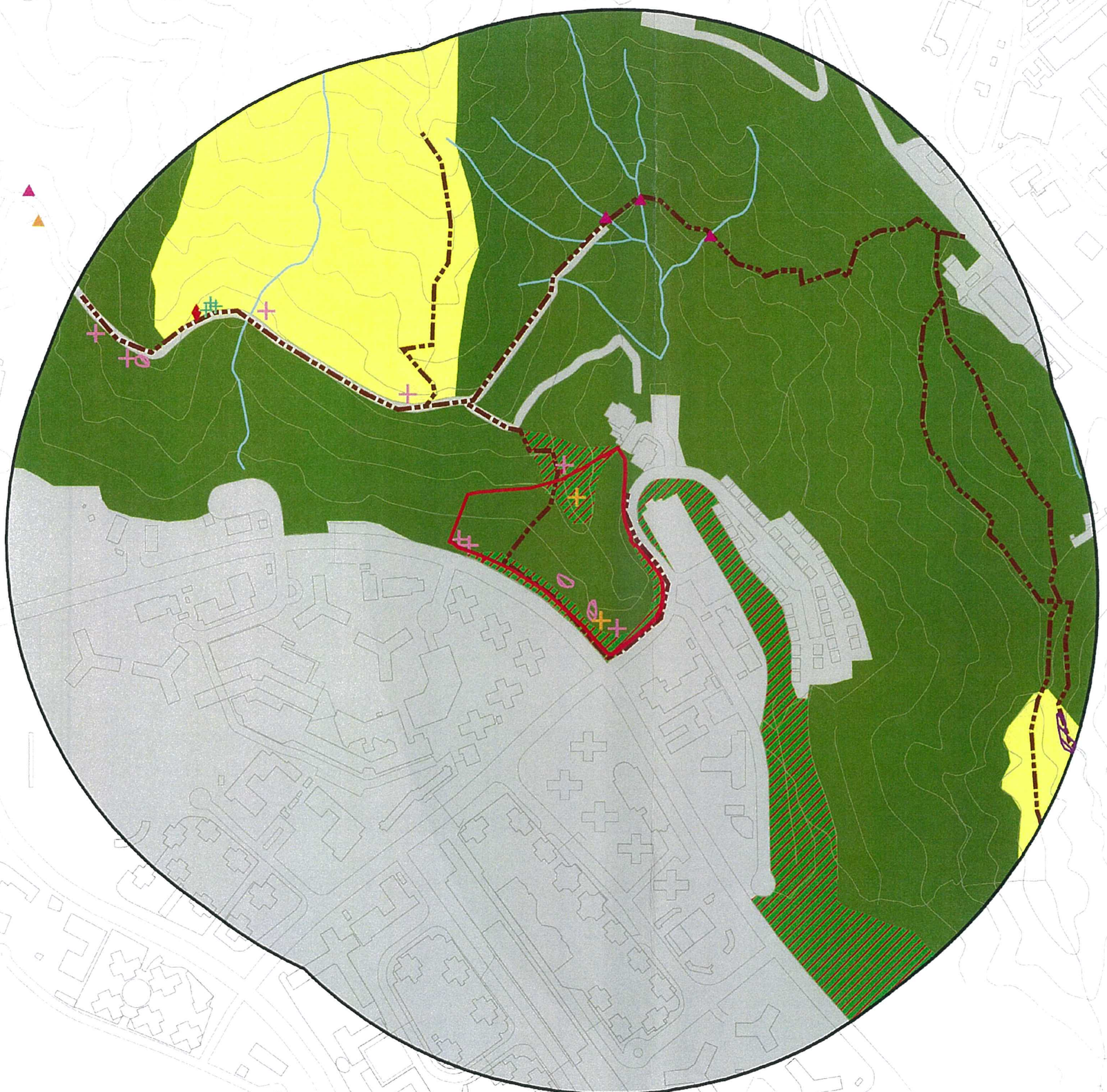

- Project Area
- 500m Study Area
- Semi - natural Watercourse
- Survey Transect
- Shrubland
- Secondary Woodland
- Plantation
- Developed Area

Species of Conservation Importance

Plants

- *Aquilaria sinensis*
- *Gnetum luofuense*
- *Rhododendron* sp.
- Area of *Aquilaria sinensis*
- Area of *Diospyros vaccinioides*

Butterflies

- Forget-me-not

Aquatic Invertebrates

- *Cryptopotamon anacoluthon*
- *Nanhaipotamon hongkongense*

Rev	Description	By	Date

Consultant

ARUP

Contract No. and Title

Agreement No. CE 61/2014 (CE)
Site Formation and Infrastructural Works for Nine Housing Sites in Tseung Kwan O - Feasibility Study

Drawing title

HABITAT MAP OF SITE SKI-11

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0 100 200 400 Meters



- Project Site
- 500m Study Area
- Channelised Watercourse
- Semi - natural Watercourse
- Grassland
- Grassland/ Shrubland
- Secondary Woodland
- Plantation
- Developed Area
- Survey Transect

Species of Conservation Importance

Plants

- *Aquilaria sinensis*
- *Diospyros vaccinioides*
- *Gnetum luofuense*
- *Pavetta hongkongensis*
- Area of *Diospyros vaccinioides*
- Area of *Ormosia pachycarpa*

Rev	Description	By	Date

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Contract No. and Title

Agreement No. CE 61/2014 (CE)

Site Formation and Infrastructural Works for Nine Housing Sites in Tseung Kwan O - Feasibility Study

Drawing title

HABITAT MAP OF SITE SKI-12

Drawing no.			Rev.
242030/C/087			-
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CEDD 土木工程拓展署 Civil Engineering and Development Department

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SKI-1
NORTH OF TSEUNG KWAN O VILLAGE

SKI-11
WEST OF YAU YUE WAN VILLAGE

SKI-2
NORTHWEST OF YING YIP ROAD

SKI-6
SOUTH OF CHIU SHUN ROAD

SKI-12
EAST OF HONG KONG MOVIE CITY

PO LAM

TSUI LAM

HANG HAU

TIU KENG LENG

PAK SHING KOK

MAU WU SHAN

SHEUNG YEUNG SHAN

CLEAR WATER BAY ROAD
PO LAM ROAD NORTH
YING YIP ROAD
PO LAM ROAD
TSEUNG KWAN O TUNNEL
TSEUNG KWAN O TUNNEL ROAD
PO NING ROAD
CHIU SHUN ROAD
WAN PO ROAD
PO HONG ROAD
PO YAP ROAD
TSEUNG KWAN O - LAM TIN TUNNEL (WORK IN PROGRESS)

N

LEGEND:

- INITIAL INDICATIVE LAYOUT OF FIVE TKO HOUSING SITES
- PROPOSED WOODLAND COMPENSATION AREA

Rev	Description	By	Date

Consultant
ARUP

Contract No. and Title
Agreement No. CE 61/2014 (CE)
Site Formation and Infrastructural Works for Nine Housing Sites in Tseung Kwan O - Feasibility Study

Drawing title
PROPOSED WOODLAND COMPENSATION AREAS

Drawing no.			Rev.
242030/C/090			-
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CEDD 土木工程拓展署
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Appendix XII

Development Paramenters and Rezoning Proposal for the Five Proposed TKO Housing Sites and an Area Adjoining Site 3

Amendment Items	Location	Site Area (ha, about)	Current Zoning	Proposed Zoning	Proposed Maximum Plot Ratio	Proposed Building Height Restriction (mPD)	No. of Flats (about)	Estimated Population
A	Site 1: North of Tseung Kwan O Village	3.94	"GB"	"R(A)7"	6.5	180	3,700	10,360
B	Site 2: Northwest of Ying Yip Road	1.59	"GB"	"R(A)7"	6.5	170	1,600	4,480
C1	Site 3: South of Chiu Shun Road	0.46	"GB" and "G/IC"	"R(A)7"	6.5	130	560	1,570
C2	An area adjoining Site 3	0.018	"G/IC"	"V" (To reflect existing village development)	-			
D	Site 4: West of Yau Yue Wan Village	2.95	"GB"	"R(A)7"	6.5	140	2,500	7,000
E	Site 5: East of Hong Kong Movie City	2.26	"GB"	"R(A)7"	6.5	210	2,900	8,120
						Total :	**11,260**	**31,530**

(獲通過的會議記錄)

西貢區議會
二〇一七年第一次特別會議記錄

日期：2017 年 4 月 19 日 (星期三)
時間：下午 2 時 30 分
地點：西貢區議會會議室

出席者	出席時間	離席時間
吳仕福GBS太平紳士(主席)	下午二時三十分	下午五時正
區能發先生，MH	下午二時三十分	下午五時正
陳繼偉先生	下午二時三十分	下午五時正
陳博智先生	下午二時三十分	下午五時正
周賢明先生，BBS，MH	下午二時三十分	下午五時正
張美雄先生	下午二時三十分	下午五時正
方國珊女士	下午二時三十分	下午五時正
莊元苳先生	下午二時三十分	下午五時正
鍾錦麟先生	下午二時三十分	下午五時正
范國威先生	下午二時三十分	下午五時正
邱戊秀先生	下午二時三十分	下午五時正
何民傑先生	下午二時四十九分	下午三時三十九
簡兆祺先生	下午二時三十分	下午五時正
黎銘澤先生	下午二時三十分	下午五時正
劉偉章先生，MH	下午二時三十分	下午五時正
李家良先生	下午二時三十分	下午五時正
凌文海先生，BBS，MH	下午二時三十分	下午五時正
呂文光先生	下午二時三十分	下午五時正
譚領律先生，MH	下午二時三十分	下午四時三十分
謝正楓先生	下午二時三十分	下午五時正
温啟明先生	下午二時三十分	下午五時正
温悅昌先生，BBS，MH，JP	下午二時三十分	下午五時正
邱玉麟先生	下午二時三十分	下午五時正
劉丹女士	西貢民政事務處高級行政主任(區議會)	

列席者

蕭慕蓮女士，JP	西貢民政事務處民政事務專員
郭仲佳先生	西貢民政事務處民政事務助理專員(1)
朱志豪先生	西貢民政事務處民政事務助理專員(2)
麥慧敏女士	西貢民政事務處高級聯絡主任(1)

林意麗女士	西貢民政事務處高級聯絡主任(2)
廖仲謙先生	西貢民政事務處一級行政主任(區議會)
蔣年達先生	土木工程拓展署總工程師/新界東1
張李進先生	土木工程拓展署高級工程師/7(新界東)
文家豪先生	土木工程拓展署工程師10(新界東)
譚燕萍女士	規劃署西貢及離島規劃專員
麥黃潔芳女士	規劃署高級城市規劃師/將軍澳
黃伯昌先生	規劃署城市規劃師/將軍澳2
伍莉莉女士	社會福利署黃大仙及西貢區福利專員
李愷怡女士	房屋署高級規劃師(3)
張建雄先生	運輸署高級工程師/房屋及策劃/新界東
蕭麗明女士	運輸署工程師/行人區改善計劃
黃悅群女士	西貢地政處高級產業測量師/將軍澳(西貢地政處)
陳瑞茵女士	康樂及文化事務署高級行政主任(策劃事務)3
蔣發葵先生	食物環境衞生署西貢區環境衞生總監
馬淑芳女士	食物環境衞生署衞生總督察1
朱家敏女士	奧雅納工程顧問有限公司董事
李昌盛先生	奧雅納工程顧問有限公司主任
林德華女士	奧雅納工程顧問有限公司主任
蘇震宇先生	奧雅納工程顧問有限公司顧問
余銘儀女士	AEC有限公司副生態總監

缺席者

成漢强先生，BBS，MH (副主席)
張展鵬先生
林少忠先生
梁里先生
陸平才先生
王水生先生

主席歡迎所有出席及列席會議的人士，特別是 -

土木工程拓展署

- 總工程師/新界東 1 蔣年達先生
- 高級工程師/7(新界東)張李進先生
- 工程師 10(新界東) 文家豪先生

規劃署

- 西貢及離島規劃專員 譚燕萍女士
- 高級城市規劃師/將軍澳 麥黃潔芳女士
- 城市規劃師/將軍澳 2 黃伯昌先生

社會福利署
- 黃大仙及西貢區福利專員 伍莉莉女士

房屋署
- 高級規劃師(3) 李愷怡女士

運輸署
- 高級工程師/房屋及策劃/新界東 張建雄先生
- 工程師/行人區改善計劃 蕭麗明女士

西貢地政處
- 高級產業測量師/將軍澳(西貢地政處) 黃悅群女士

康樂及文化事務署
- 高級行政主任(策劃事務)3 陳瑞茵女士

食物環境衞生署
- 西貢區環境衞生總監 蔣發葵先生
- 衞生總督察 1 馬淑芳女士

奧雅納工程顧問有限公司
- 董事 朱家敏女士
- 主任 李昌盛先生
- 主任 林德華女士
- 顧問 蘇震宇先生

AEC 有限公司
- 副生態總監 余銘儀女士

2. 主席表示，下列議員已於會議前按規定提交缺席會議通知書：

- 成漢强先生，原因為身體不適
- 張展鵬先生，原因為不在香港，身處外地
- 林少忠先生，原因為出席市政服務上訴委員會會議
- 梁里先生，原因為不在香港
- 陸平才先生，原因為工作

3. 由於沒有反對，主席宣布根據西貢區議會會議常規第 51(1)條，批准有關缺席申請。

I. 將軍澳具房屋發展潛力用地可行性研究及將軍澳分區計劃大綱圖擬議修訂項目

(SKDC(M)文件第 111/17 號)

2. 主席表示由於議題對西貢區非常重要，故召開是次特別會議。在議員同意下，主席表示每位議員輪流發言，待部門回應後如仍有時間則讓議員作

第二次發言。

3. 土木工程拓展署總工程師/新界東 1 蔣年達先生和規劃署高級城市規劃師/將軍澳麥黃潔芳女士按會議文件及所播放的簡報介紹上述計劃。

4. 陳繼偉先生認為署方表示未曾就擬議用地進行環評研究但又認為擬議用地沒有生態價值的言論互相矛盾。在興建將軍澳—藍田隧道及 P2 路工程時砍伐的大量樹木，部門需於適當地點再進行補種。此外，已通過二十年將興建的調景嶺公園至今尚未展開工程，故希望部門可解答有關進度及同時解釋如何保障受擬議建屋工程影響的景觀及樹木。港鐵雖承諾於 2021 年提升訊號系統，但現時將軍澳線於繁忙時間的載客量已達至 106%，他認為有關的系統提升措施只能應付區內不斷上升的人口，而非突如其來的新增人口。此外，署方表示將寶寧路及影業路的迴旋處改為紅綠燈便可解決區內交通擠塞的問題；以往寶順路的紅綠燈轉成為迴旋處，但其後署方又表示在興建將軍澳—藍田隧道時會再次將寶順路的迴旋處轉回紅綠燈，他認為部門不同時期便有不同說法。他指出，現時將軍澳的配套不足以應付將軍澳南未來十多個屋苑、五幅擬議用地及第 137 區新增的人口，因此希望作出臨時動議，動議措辭：「要求政府提供環境評估、交通評估、全面改善交通、休憩用地、社區設施及民生配套計劃後才進一步研究將將軍澳興建公營房屋。」

5. 方國珊女士認為規劃署的《香港規劃標準與準則》不切實際，現時將軍澳隧道的塞車情況嚴重，港鐵擠迫，區內的交通已超出負荷，如影業路至大埔仔、西貢及清水灣一帶擠塞情況嚴重。她指出，政府部門欲將沙田水泉澳邨的發展規模分拆套用於將軍澳的發展，但發展擬議用地會涉及 11.2 公頃斜坡及影響 16,000 棵樹木，成本效益並不理想。她另表示，專業動力曾於五年前已多次向政府及現任特首建議將第 137 區的深水工業用地改劃為可容納十萬人口的新市鎮。此外，她認為應優先考慮發展棕地。她明白香港市民對公屋及居屋的需求甚大，但仍希望政府部門可提交將軍澳未來五年的交通規劃藍圖後才討論是否容納新增的公營房屋建議。

6. 張美雄先生明白要加快公屋輪候冊人士上樓的時間，但作為地區議員，他應以地區的民生為本。他認為部門是次諮詢計劃非常粗疏，除小量道路優化外，並沒有任何其他建議，因此希望部門可提供環境及交通評估報告予各議員再作考慮。以五幅建議用地為例，第三幅及第五幅用地沒有任何道路優化方案，如百勝角電影城以東的土地，鄰近沒有港鐵站及泊車位，只有一輛 298E 巴士途經此地。該地點的唯一出入口是環保大道，而每日多達 4,000 多部泥頭及垃圾車會經環保大道進出堆填區或填料庫，超載及超速問題時常發生，一旦發生交通意外便會導致交通癱瘓。此外，百勝角已落實興建消防訓練宿舍及中醫醫院，現時計劃再加建 2,900 個住宅單位，在未有任何道路優化改善措施前，他必定阻止推展有關建屋計劃。

7. 周賢明先生表示，於兩三年前西貢區議會已表明立場第 137 區可作為綜合房屋、商業用途或配合政府的其他發展，並希望政府不再考慮餘下九幅插針式用地。將軍澳的發展已於十年前透過將軍澳的可行性研究作出詳細

規劃，故他認為不應再有太大的改變。基於現時的環境、交通及鄰近地區配套考慮，第 137 區是在眾多建議用地方案中唯一可取的發展用地。根據會議文件第 12 段，五幅用地除 C3 項約 0.018 公頃位置是如實反映由「政府、機構或社區」用地變更為「鄉村或發展」外，其餘 A、B、C1、C2、D 及 E 項的用地都不應改變有關土地用途。基於反對會議文件第 12 段的要求，他認為區議會應有明確的立場反對文件的第 15 段修訂將軍澳分區計劃大綱圖。他希望可就文件的第 12 段及第 15 段進行表決。

8. 邱戊秀先生表示個人不反對興建房屋，但必須有妥善的交通配套。於上屆區議會已通過擴闊影業路及銀線灣的迴旋處（即清水灣道往坑口道的位置），但有關工程尚未動工，故希望署方可加快推展項目。他表示剛才向土木工程拓展署代表遞交請願信時，已明言現時大部份大專院校都有港鐵直達，雖然將軍澳—藍田隧道於 2021 年啟用後可紓緩車流，但卻未能疏導新增的人流。此外，清水灣及西貢的居民亦會在坑口乘搭港鐵前往港島區，因此他希望港鐵可考慮於第 137 區、科技大學、西貢及將軍澳加設車站。

9. 溫啟明先生表示五幅綠化土地用作興建公營房屋可幫助市民加快上樓，但擔心現時將軍澳的配套未能應付。將軍澳南屋苑逐步落成，人口因而急劇增加。現時將軍澳隧道已接近飽和，每天早上 6 時 30 分已開始出現塞車情況，而港鐵於繁忙時間的載客量亦達 97%。會議文件指出，港鐵會於 2021 年提升訊號系統以增加 10%載客量，但他質疑有關措施是否能應付新增的 3 萬或更多人口。他另指出，港鐵早前因輕微電力故障，令市民要花約兩至三小時才可前往港島區或市區。將軍澳—藍田隧道雖預計於 2021 年後啟用，但有關房屋亦於 2024 年入伙，他擔心倘若將軍澳—藍田隧道工程有所延誤會令區內的交通問題更趨嚴重。此外，他希望部門可進一步提供將軍澳村以北的小夏威夷徑改道措施的資料，以供居民參閱。

10. 溫悅昌先生表示，將軍澳人口已達 40 萬，區內的醫療、交通及社區配套已接近飽和。此外，日出康城、將軍澳市中心、安達臣道石礦場及第 137 區都會陸續興建房屋，屆時人口會超過 60 萬，遠超當初規劃的 48 萬人口。他表示早於 2 年前已聯同坑口區區議員提出動議反對於昭信路以南興建公營房屋，並獲區議會通過，故他不明白是否部門未曾知悉區會的意見或根本不尊重區議會。溫悅昌先生表示原則上支持政府覓地興建房屋，故曾動議於第 137 區發展完整的房屋規劃。插針式的房屋雖可解決部份住屋問題，但同時亦會產生其他問題，故他反對盲目興建插針式樓宇。政府現時建議昭信路以南一幅政府機構或社區用地連同綠化地帶改建樓宇，該用地全長不足三百米，興建房屋會引致景觀問題及屏風效應。

11. 譚領律先生表示，早於 2005 年土木工程拓展署就將軍澳進一步發展的可行性研究廣泛諮詢居民意見，結論是將軍澳不會再進行填海工程，而沿海的住宅要以梯楷式發展。他指出，今天並不應逐一討論每幅用地，而是討論將軍澳應否再進一步發展。他認為部門不應只諮詢區議會意見後便向城市規劃委員會(下稱「城規會」)申請改變土地用途，應廣泛諮詢居民意見。政府部門應要有全面的交通、醫療及設施配套等計劃才可考慮於將軍澳區覓地建屋。他查詢，會議文件中指出署方會另聘顧問公司為餘下四幅土地

進行進一步研究，是否表示顧問公司在第一階段研究後認為該四幅土地（如翠林及康盛對出的土地）並不適合發展。此外，署方於年初曾向立法會工務小組申請 2,800 萬進行寶達以東及翠林以西的土地平整及建設基礎設施項目，故詢問署方現在是否正覆檢有關土地，他希望了解詳細計劃內容。

12. 區能發先生贊成興建公營房屋，但有關部門應先做好區內的配套設施後才可興建。

13. 鍾錦麟先生表示，曾接獲將軍澳居民反映區內的居住環境十分擠迫。現時部門以 14 頁會議文件及粗疏的理據，實在難以說服居民將軍澳的交通配套可應付新增的 3 萬人口。五幅擬議用地中，雖有四幅是較鄰近寶琳及坑口位置，但有關用地仍需交通工具接駁，故他查詢署方是否已評估寶琳及坑口站於繁忙的交通路面情況下是否可再承受新增的 3 萬人流。即使港鐵承諾提升訊號係統增加載客量，但寶琳站現時只有一個月台，實難以疏導新增的人流。此外，在他選區對面魷魚灣村以西的土地地勢較英明苑高，擬議人口及單位數目亦較英明苑多，部門表示該用地因鄰近地鐵站而不需要交通接駁設施，故他詢問部門代表是否已進行實地視察。當區居民擔心魷魚灣村以西的房屋落成後，市民會穿越欣明苑及英明苑的私人管理地方而引伸出管理問題。他認為區議會應反對這五幅土地改劃用途的建議。

14. 范國威先生表示覓地建屋有需要，但盲搶地、插針樓及屏風樓這些破壞政府行之有效的規劃準則絕不可取。政府於 2013 年施政報告中初次提及四項條件把綠化地用作建屋，包括：沒有植披、荒廢、平整及失去功能的土地。但 2014 年的施政報告則改為包括：作為緩衝作用及保育價值低的土地亦可建屋，將軍澳的五幅土地亦因而用作考慮建屋。他認為有關規劃並不完善，建議政府於覓地時應有優次緩急，先考慮使用全港現有 1,200 公頃棕土及發展橫洲 43 公頃土地(單是遭人霸佔的官地已有約 17 公頃)，而非將軍澳的五幅約 11 公頃綠化地。新民主同盟曾於將軍澳舉行為期約一星期的民意調查，超過 8 成將軍澳居民反對是次五幅綠化用地用作建屋。沙田及馬鞍山區約 7,000 公頃的土地容納 66 萬人居住，而將軍澳 1,700 公頃的土地(其中 150 公頃用作堆填區)將會有超過 61 萬人居住，即包括將軍澳原有的 48 萬人口、是次報告中提及的 3 萬新增人口及將來發展第 137 區的 10 萬人口。他希望區議會能有明確的表示，故提出臨時動議，動議措辭：「因為超出交通及社區設施負荷及破壞綠化地的緩衝作用，本會反對政府建議修訂將軍澳五幅綠化地改劃為住宅地。」

15. 呂文光先生理解政府覓地建屋的需要，但認為部門在興建房屋前應先提供相關的社區配套，否則對當區居民不公平。新民主同盟曾就有關土地改劃用途建議諮詢市民的意見，收集共約 600 多份意見書，當中 87%市民不支持將區內的綠化地改為住宅用地，94%受訪者擔心會加重將軍澳的社區負荷，59%受訪者認為五幅綠化地不應改劃為住宅用地，應維持原有的綠化地帶功能。此外，計及會議文件提及新增的 3 萬人口及將來第 137 區的 10 萬人口，將軍澳人口預計將超過 60 多萬，而區內的鐵路及交通配套並未能配合。位於將軍澳村、魷魚灣村及影業路附近的擬議用地都需要接駁交通工具，但文件內卻未有相關配套措施的詳情。其次，約 70%居民擔心樓宇過

密及屏風樓效應，因昭信路的用地是位於通風廊位置。他認為部門未顧及將軍澳居民的感受，會議文件疏粗，只純粹為加建公營房屋而漠視將軍澳居民的利益。

16. 黎銘澤先生表示沒有人反對政府覓地建屋，但認為政府捨易取難，不發展現時用作放置貨櫃的地方、棕地及高爾夫球場，反而強迫將軍澳居民接受擬議的規劃方案。他曾就昭信路以南用地改劃建議收集民意，市民認為擬議用地是綠化作用，如發展便需鏟平斜坡及砍伐大量樹木，會破壞自然環境及通風系統，發展斜坡便要建造擋土牆，亦涉及將來的維修保養等問題。他指出，現時居民於坑口港鐵站在繁忙時間需等候 2 班車才可上車，則有關建屋計劃落實後部門將如何疏導新增的千多名人流。此外，政府部門曾表示會於將軍澳興建通風廊以疏導堆填區的異味，但現今尚未有任何消息。雖說擬議計劃中昭信路距離港站約 0.5 公里，但現時該路段並沒有任何公共交通設施及行人過路設施，若由港鐵站前往昭信路用地就必須經連理街天橋、和明苑、明德邨及半見邨等，故他擔心落實擬議計劃後會加劇市民違規橫過昭信路的問題。他希望區議會可就有關計劃表達強烈的反對意見。

17. 劉偉章先生理解香港居民對住屋的需求，但表示各議員均不認同於區內建設插針式的公營房屋。他指出交通及道路的配套對每個發展項目都非常重要，土木工程拓展署雖表示將軍澳—藍田隧道開通後可解決區內的交通問題，但他認為如不同時擴闊路面，增加停車場等配套，會使區內交通擠塞及違例泊車問題更趨嚴重。魷魚灣村路面狹窄，因興建消防宿舍後沒有相應的停車場配套，以致違泊問題嚴重。現時影業路將計劃興建插針式公屋，他查詢署方將如何擴闊影業路的路面以應付新增的人流。此外，他建議影業路建設行人隧道而不是交通燈，因行人隧道可令路面的車輛暢通無阻及配合將來清水灣電視錄影廠的發展需要。他希望署方在建設規劃發展前可先完成區內的交通評估及交通配套。

18. 邱玉麟先生表示，各議員都擔心區內交通配套及康樂設施不足，故希望政府部門不要建設插針式樓宇，並指出政府部門只各自為政。魷魚灣村建設公務員宿舍時因部門只按舊規劃標準辦事，為當區帶來不少問題。此外，他亦表示每年區議會都向立法議會議員反映西貢公路擴闊問題，但有關部門只按章辦事，往往要待所有客觀條件都符合準則時才作進一步規劃。

19. 李家良先生了解現屆政府覓地建屋的措施及不反對政府建設公營房屋以解決住屋問題。梁振英特首於施政報告內表明要地盡其用，因而改劃綠化地為公營房屋，但他認為只顧及建設房屋而不解決鄰近居民需要的做法並不全面。規劃署簡報中有關影業路的改善設施，其實區議會已多次向當局反映意見，卻遲遲未有落實解決方案。大網仔路現時的交通擠塞情況嚴重，在尚未解決有關問題前，擬議新增人流只會令區內的交通問題惡化。此外，港鐵每日於繁忙時間都非常擠迫，雖說港鐵會提升訊號系統以增加10%的載客量，但有關數據只是樂觀的估計。候任特首林鄭月娥女士曾表示要一地多用，所以他認為擬議用地除用作興建房屋外亦可建設配套設施，如泊車位及康樂設施等，希望部門可先解決當區民生需要後才規劃房屋發

展。

20. 莊元苳先生表示，民建聯西貢將軍澳支部就政府的建議於區內進行民意調查，總共收集約 1,108 份意見書，當中居民主要擔心區內的交通問題。部門曾提及將軍澳—藍田隧道建成後可紓緩區內交通問題，但他仍擔心將軍澳—藍田隧道未能負荷擬議新增的 3 萬人口、將軍澳南區新落成的屋苑及日出康城未來十年發展的新增人口。此外，他認為署方指沙中線可分流區內的人流的言詞涉及誤導成份，東九龍支線應更有效分流將軍澳的人流，故希望有關部門加快落成東九龍支線的工程。他建議政府於日出康城興建鐵路直接接駁港島區，以真正改善區內交通擠情況。另外，將軍澳區有 43 萬規劃人口卻缺乏公營街市、文娛中心及泊車位等，故建議政府先考慮滿足現時 43 萬人口的需求後才考慮發展公營房屋。此外，他指出諮詢文件的內容粗疏，當中並未提及五幅用地的社區配套，如是否有預留用地建設公營街市、學校、診所及商場等，市民擔心新增的 3 萬人口會分薄現有的社區資源。他希望部門先作詳盡社區規劃及改善設施後，才就有關建議再諮詢區議會。

21. 簡兆祺先生表示因為現時的公屋輪候冊已有 28 萬 3 千多人，故全力支持覓地興建公營房屋、居者有其屋及綠置居。他表示自己服務公屋區居民，每日約有三份一以上的求助者都是公屋居民、擠迫戶及輪候超過五年至七年的市民。他認為規劃署有嚴重錯失，於近十年間嚴重傾斜私人發展商，並將尚德邨至將軍澳南區的土地全售予私人發展商建設私營房屋。現時私人物業尺價超過 15,000 元，年輕人難以置業，故希望署方可實地視察及作研究，並與當區受影響的居民多作理性的探討及了解。他表示曾接獲將軍澳村居民對擬議計劃提出反對意見，並建議部門可在擬議用地作完善的規劃，如增建街市、體育設施，或提供專線巴士往來觀塘區至九龍區，以提高市民的接納程度。

22. 陳博智先生表示，民建聯團隊已清楚表達立場。他本人和凌文海先生已在坑口一帶進行了不下十次的街頭諮詢，街坊紛紛表達其反對意見，並認為將軍澳的配套難以應付新的房屋發展。先不討論醫療配套問題，街坊於繁忙時間需等待多班港鐵列車始能上車，而且港鐵又經常故障，將軍澳隧道亦有嚴重交通擠塞問題，而厚德街市更是全港最昂貴的街市。另外單單是在影業路以西北 1.59 公頃的土地建造 1,600 個單位，便需移除二千多棵樹木；而影業路迴旋處是眾所周知的交通黑點，惟政府就發展影業路及第 137 區方案一直未提供確切的回覆，而港鐵亦只就服務經常受阻的問題回應指已計劃提升將軍澳線的訊號係統，這些都令大家十分憤怒，感覺有關單位並無意解決問題。

23. 凌文海先生表示，民建聯的立場已由正、副主席相繼提出，故他希望藉此表達其個人感受。現時市民輪候公屋的時間十分長，等待四年至五年仍未輪候到，議員常被求助，要求寫信表達居民苦候公屋的情況，於是政府覓地興建公屋，但現時已居於該處的市民卻又不願意政府在其居住地方附近再建公屋，因此政府正面對一個兩難情況。另外，各議員早前一致反對在昭信路興建公屋，現時政府又建議在其他四幅土地再建公屋，街坊均表示反對。故此，他建議政府研究第 137 區能否興建屋邨羣，並認為這是解

決問題的最佳辦法，相較在不同區域分散興建公屋為佳。他亦認為政府應研究興建隧道由第 137 區通往柴灣的可行性，以改善將軍澳的交通接駁。最後，他希望政府能多聆聽並考慮社區的意見。

24. 謝正楓先生表示，他代表將軍澳民生關注組表達立場，希望政府能待足夠的社區及交通配套建立後，才在將軍澳覓地建屋。將軍澳的社區及交通配套匱乏，市民在繁忙時間需等候兩至三班港鐵列車方能上車，運輸署又多次企圖削減巴士班次，然則將軍澳居民該乘坐何種交通工具前往九龍及港島。另外，在 1990 年代，政府的規劃發展大綱圖標示坑口及百勝角為緩衝區，惟現在當局卻計劃於坑口昭信路至百勝角一帶發展樓宇，此舉有違當年的發展規劃，他擔憂在發展樓宇後，將破壞附近的生態環境及造成屏風效應。此外，他表示收到居民對在魷魚灣村以西興建公屋的憂慮，希望政府能公布環境評估報告及社區承載力報告，才再去研究在將軍澳發展房屋的可行性。

25. 土木工程拓展署蔣年達先生表示，將軍澳已規劃的設施，例如道路及路口改善建議等尚有待完成，署方與運輸署保持緊密聯繫，運輸署並已在署方進行可行性研究時，給予很多寶貴的意見，包括把影業路的迴旋處轉換成交通燈位等建議。在將軍澳對外交通方面，新的將軍澳-藍田隧道預計於 2021 年完工。如落實將軍澳發展房屋的規劃，五幅公營房屋用地預計最早可於 2024 年完工，故仍有時間改善將軍澳的交通配套。他強調署方的交通評估是有數據分析支持的，文件只是簡列了部份數據，交通評估顯示，只要採取適當的道路改善措施，將軍澳的交通配套足以支持五幅建議房屋發展用地所產生的交通需求。

26. 奧雅納工程顧問有限公司董事朱家敏女士表示，已根據規劃署所提供的資料作交通評估，包括所有已知的人口和規劃，以及城規會新批出的發展。

27. 土木工程拓展署蔣年達先生表示，交通評估報告已把所有已知及規劃人口預算在內，而議員所關注的第 137 區的新增人口，於「重新規劃將軍澳第 137 區的規劃及工程研究-可行性研究」將另作獨立審視，該可行性研究將會探討發展第 137 區所需的基建配套，其中包括交通配套等。因第 137 區的可行性研究仍在初步的研究階段，容後可再作研究及討論。他續表示，該五幅房屋用地發展無可避免地影響大約一萬六千棵樹木，而其中大部份會被砍伐。該五幅用地的發展並不是《環境影響評估條例》下的指定工程項目，因此署方未有進行《環境影響評估條例》下的環境評估，但這不代表署方不關注房屋發展帶來的環境影響。署方已就環境及景觀等方面進行初步評估，而在下一階段的詳細設計時，署方將會就詳細設計方案再審視發展帶來的環境及景觀等方面的影響。署方亦有留意到其中兩個發展用地旁邊有溪澗及行山徑，現在載列的發展用地已經過微調以避開部份溪澗及行山徑，在其後的詳細設計階段，署方會再就地理環境及詳細設計諮詢區議會，這些問題並非在技術上無法解決。此外，署方有留意到清水灣道近銀線灣一帶地方的交通問題，並已提出相應的交通改善方案。他強調署方亦評估整個將軍澳對外及對內的交通能否負荷作考慮。

28. 規劃署譚燕萍女士就議員的提問回應如下：

- 現屆政府的政策是在短、中、長期三方面加快提供土地供應，故署方一直就不同土地用途作檢討，包括檢視空置用地、政府預留而未有使用的土地及綠化地帶等是否有改劃為房屋用地的空間；
- 在綠化地帶方面，署方已於2012年進行第一階段的綠化地帶檢討，包括在現時沒有植被及已荒廢或平整的綠化地帶進行檢視。而在2013至2014年，署方進行第二階段的綠化地帶檢討，審視已建設用地，即市區及新市鎮的邊緣綠化地帶。該些綠化地帶毗鄰已發展的用地、道路及基建，當中雖然有植被，但作為緩衝的作用及保育的價值相對較其餘綠化地帶為低，具優勢改作房屋用途，亦是作為新市鎮擴展的考慮；
- 至於第137區規劃發展方面，署方剛開始進行第137區初步的規劃及工程研究。第137區位置偏遠，交通接駁及相關基建設施匱乏，因此署方需作詳細的工程研究，包括研究是否需興建新的鐵路站及道路設施、提供食水供應、建設排水設施及增建社區配套等，故發展第137區被視為長遠的房屋土地供應，惟在短、中期仍需盡快改劃土地用途以增加土地供應；
- 至於棕地問題，署方多管齊下地尋覓土地供應，而棕地是其中一環。署方正準備開展新的顧問研究，當中涵蓋發展棕地的研究，將檢視棕地是否具發展潛力。政府對棕地沒有統一或標準的定義，故署方需確定不同棕地的確實用途，並進行全面研究以制定發展計劃，通過綜合規劃及基建的提升，釋出土地的發展潛力，並通過發展及重整土地，從而改善新界環境；及
- 在社區設施方面，署方根據《香港規劃標準與準則》就將軍澳的社區設施進行檢視，並與相關部門商討，檢討將軍澳的社區設施是否足夠。現規劃的社區設施將足以承載五幅發展用地帶來的新增人口，署方並會與其他政府部門緊密聯絡，如其他部門認為有需要提供額外社區設施，如社福設施或公營街市，署方樂意配合並覓地提供。另外，五幅發展用地的最高地積比率為6.5倍，當中包括非住用的樓面面積，故如有需要，這些空間亦可用作發展社區設施。

29. 土木工程拓展署蔣年達先生就譚領律先生的提問作補充，餘下的四幅將軍澳發展用地並非在技術上發展不可行，只是現階段部門之間未達到共識，需進行基建配套上的覆檢及深層次的可行性研究，待完成後方能向區議會提出有關建議。

30. 運輸署高級工程師/房屋及策劃/新界東張建雄先生表示，署方一直就五個發展項目與土木工程拓展署有緊密的聯繫。署方已為交通評估報告作出了審視，並提供了很多交通方面的意見。至於西貢區內的泊車位問題，署方會根據《香港規劃標準與準則》的指引，在日後的詳細設計階段時，要求相關部門制定有關用地的泊車位需要。

31. 主席表示，兩位鄉事委員會主席因身體不適而未能出席會議，故希望在此轉達他們的意見。主席續表示，兩位當然議員與在座議員的意見一致，均不贊成政府在將軍澳改劃土地用途興建房屋。另外，他們認為政府政策對原居民極不公平；政府把綠化地帶改變土地用途時會同時開闢道路接駁，但原居民發展小型屋宇卻沒有道路配套；地政署批准原居民興建小型屋宇，

卻不批准申請臨事道路作運輸材料之用。政府興建房屋是為了改善民生，而原居民興建住屋也是為了改善村民環境，然而待遇卻是差天共地，故兩位當然議員希望藉此向有關政府部門反映意見，並期望新一屆政府能以新思維為居民解決問題。

32. 主席續表示，他作為西貢市中心的民選議員亦想就房屋發展表達意見。政府近年大興土木發展私人樓宇，惟道路、泊車位、社區設施等卻絲毫未見提升。他曾詢問政府是否可改善西貢區內的社區設施，政府卻回應表示大部份的土地已用作發展，沒有空間用以增加社區設施。以賽馬會澤西洲公眾高爾夫球場停車場為例，民政事務局擁有該處的土地所有權，在該處興建兩層停車場，本應可多提供幾百個泊車位，解決西貢區於假日交通擠塞及車位不足的問題，惟局方卻不願意研究收回土地加建有關設施。另外，西貢賽馬會大會堂、西貢政府合署及方逸華診所，規劃署也應運用新思維提供一地多用的設施，增加新配套，藉以改善西貢舊區的不足。他希望新政府能聆聽區議會的意見，由下而上地改善民生。政府推行新的政策時希望區議會支持，但舊的承諾卻未有兌現，故區議會實難以支持這些新政策。此外，顧問公司只是就政府提供的方案作出研究，根本沒有顧及現時潛在的問題。

33. 方國珊女士批評規劃署仍然使用不切實際的《香港規劃標準與準則》。她表示，現時將軍澳的交通、醫療、房屋及其他民生配套嚴重不足，目前的問題仍未解決，又如何可再容納新的居民，因此議員才會提出臨時動議，要求政府先改善將軍澳的基建配套，才再考慮興建房屋。她續表示，興建公屋需時約 7 至 10 年，政府應更有承擔地落實興建由將軍澳伸延至會展的鐵路，並承諾於東九龍鐵路加設科大站、康景站及翠林站。另外，專業動力亦建議政府興建跨九龍半島的鐵路，以縮短將軍澳站至尖沙咀站所需的時間，把行車時間由 45 分鐘削減至 15 分鐘，增加社區的承載力。她並促請政府加快研究如何有效地發展第 137 區 80 公頃的土地，而非以逢地插針的方式興建公屋，因這樣交通及建築成本將會非常高昂。

34. 范國威先生表示，土木工程拓展署曾在 2002 年 12 月開始至 2005 年進行橫跨 36 個月及耗資 2,100 萬的將軍澳進一步發展可行性研究。當時將軍澳的人口約為 28 至 30 萬，這項研究鑽研將軍澳的未來發展，研究如何容納透過填海推升至 48 至 56 萬的人口。當時的研究共有四個主題，包括：(1)不作進一步填海、(2)促進康樂發展潛力：康樂及水上活動、(3)新月形海濱消閒區及(4)促進房屋及康樂發展，全面地考慮到將軍澳的交通及社區配套設施等。從四個主題可窺探得知政府一方面希望透過改善康樂文娛設施爭取社區的支持，另一方面希望透過填海增加土地供應，達致多方面的發展，是較為完善的規劃。此外。他質疑政府於 2015 年提出發展九幅用地，為何現在的可行性研究卻斬件式地先發展五幅用地，而另外四幅土地卻因挑戰性較高而需待相關部門作進一步研究。另外，第 137 區本應可容納 10 萬人口，政府卻稱不知如何規劃，上述都令議員難以釋除疑慮，因此他認為各議員應清晰表態，告知城規會，區議會明確反對修訂將軍澳分區計劃大綱圖。

35. 温悅昌先生表示，他本人於兩年前政府計劃於九幅用地興建公營房屋時

已於各個屋苑進行民調，結果有八成居民對建議持反對意見，只有兩成表示支持。根據他近日再次進行的民調，同樣有絕大部分居民持反對意見，他亦收到海悅豪園業主委員會主席、和明苑業主立案法團主席，以及其他多個屋苑主席的反對意見，當中有意見希望於昭信路以南的政府、機構或社區用地興建長者中心、長者院舍、圖書館，甚或公營房屋等。他表示，如獲主席同意，他將會提出臨時動議。

36. 莊元苳先生表示，將軍澳村以北、魷魚灣村以西分別會增加 3,700 和 2,500 個單位，比當地現時居民數目還要多。他指出，鄉郊居民支持政府發展新市鎮後沒有得到任何益處，相反丁屋申請卻遲遲未獲審批。另外，他查詢政府有否考慮擴大鄉村土地，正如邱玉麟先生當年在政府同意為居民增加泊車位的情況下，支持在馬游塘村和魷魚灣村興建紀律部隊宿舍，惟事後政府卻表示做法並不可行，有鑑於此，他認為政府難以說服當地居民同意於當地興建房屋。最後，政府代表未有就東九龍線以及日出康城接駁至港島線的可行性作出回應。

37. 陳繼偉先生表示，部門未有對他的提問作出回應。他指出，政府只懂得以迴旋處或交通燈解決問題，但以將軍澳南寶盈花園十字路口為例，該處交通燈於每次綠燈時只能讓三至四輛車通過，而紅燈時間卻長達兩分鐘，駕車人士於繁忙時間十分鐘只能行走一小段道路，然而政府卻表示只要改裝一個交通燈便能解決所有問題，有關說法實令人難以相信。另外，署方於文件第 14 段表示「根據《香港規劃標準與準則》規定的標準，將軍澳現有及已規劃的政府、機構或社區設施及休憩用地的數量已大致足以應付將軍澳整體規劃人口所需」，但問題在於政府是根據已規劃而非已興建的配套設施作計算，例如調景嶺公園早於 20 年前已開始規劃卻仍未興建。因此事實上區內配套是完全未能符合市民的需求，配套設施滯後是非常明顯的問題。另外，他不明白何以顧問公司會認為現有交通配套已可應付居民所需，因兩年前港鐵於繁忙時間的使用率已超出負荷至 100. 6%，其後將軍澳南區還有多個居苑發展，將合共為將軍澳增加約六萬人口及增加港鐵將軍澳線的使用率約 14%，港鐵於 2021 年增加的 10%已無法補足人口的增長，而以上數據仍未包括居屋的數字，事實證明交通配套實在遠遠未能滿足需求。

38. 邱戊秀先生表示，運輸署尚未回應他有關影業路迴旋處的提問。他向運輸署查詢，早於三屆前的區議會已要求於假日禁止旅遊巴士在萬年街停泊，以免造成西貢舊墟交通擠塞，希望署方盡快跟進。

39. 鍾錦麟先生表示，2014 年時任發展局副局長馬紹祥先生親自到訪西貢區議會，討論房屋用地的問題，而區議會當年已清楚表明需在提供確實選址的情況下才能進行討論。惟是次諮詢顯示各個政府部門只是各自為政，甚至會議文件亦有錯漏，此外很多街坊提出的問題仍無法解答，文件只是環繞着解決香港的住屋需要，他認為這種做法有別於以往的規劃，規劃應着重於為居民建立一個如何的社區，而非只集中討論如何改劃五幅用地。他表示，文件中表示會於寶琳增加約 17,000 人口，但區內商場的食肆於假日經已座無虛席；此外小夏威夷徑的生態價值很高，並非隨便改道便能解決問題。政府現時只以 14 頁的文件試圖說服大家，因此他認為不應通過有關建議，否則只會為社會製造矛盾。

40. 劉偉章先生表示他本人為坑口東的當區議員，政府建議的五幅用地大部分位於鄉郊地區的邊緣，而鄉郊居民過往為了將軍澳新市鎮的發展及解決香港住屋問題作出莫大貢獻，因此應讓受影響的田下灣村、佛頭州村、魷魚灣村及將軍澳村等原居民優先申請小型屋宇，因他們為香港住屋問題付出並忍受至今，並因而無法繼續發展鄉村。

41. 張美雄先生表示，部門剛才未有就有關百勝角及環保大道一帶的交通問題作出回應。他表示，擴建堆填區的撥款於 2014 年獲得通過，現有部份仍在運作，而堆填區的擴建部分仍需十年八載才會關閉。環保大道是百勝角公屋計劃的唯一出入口，現時的泥頭垃圾車於未來十年都會有四千多架次，因此關注如何解決環保大道的交通問題。另外，他相信大部分議員會認為《香港規劃標準與準則》已非常過時，以公營街市為例，每一萬人應有 40 至 45 個公營街市攤位，惟日出康城連同浚瀅一期及二期已有接近五萬人口，但康城一帶連十個攤位也沒有。他認為政府部門以有關手段欺騙市民，在現有需求亦未能滿足的情況下，實難以通過興建房屋的建議，如政府就計劃沒有任何配套改善計劃，他本人和區內過萬名居民必定會全力阻止。

42. 李家良先生表示，不少現時居民遇到的問都是源自於《香港規劃標準與準則》，於上次檢討時，有關公營街市的準則被刪除，故詢問是否代表將軍澳將不會再興建公營街市。現時所有市民都需要前往領展或私營街市購物，而物價上升迅速，認為不能因規劃準則沒有相關項目便不作考慮，他建議署方尋求更高層次的協助以統合各個部門，例如統合規劃署、地政總署、康樂及文化事務署和食物環境衞生署一同解決居民的問題，以滿足現有居民或即將入伙的市民的日常需要。另外，他希望清水灣道和西貢公路的交通問題能一併獲得解決。

43. 謝正楓先生表示，將軍澳民生關注組建議政府在將軍澳第 137 區覓地建屋，但應提供完善的交通和配套後才進行大型建屋計劃，並建議港鐵加密班次及研究由康城站接駁至港島線，以減輕交通負荷。將軍澳仍有很多社區設施配套尚未完善，包括大會堂、公營街市、婦產科、獨立警區等。此外，西貢公路擠塞、違例泊車、學額嚴重不足等社區問題仍有待改善，他希望政府在完全改善上述問題後才考慮於將軍澳繼續建屋。

44. 周賢明先生表示，是次建議的五幅用地將會令社區的交通和設施超出負荷，並會破壞不少綠化地，就其他議員提出的臨時動議和相關的反對意見，他建議主席以總結方式就會議文件第 15 段要求規劃署暫停向城規會提出申請，並與相關部門作進一步商討後才再提交西貢區議會進行討論。他認為不論以臨時動議或主席總結的方式處理，都是希望能讓各部門知悉絕大多數西貢區議員的意見。

45. 簡兆祺先生表示，工聯會曾於 3 月 31 日到立法會與食物及衞生局副局長會面，要求她覓地興建公營街市，而她回應指會與規劃署進行商討，希望規劃署就此作出回應。此外，因規劃出錯，司機沒有地方泊車，導致將軍澳的道路於夜間泊滿旅遊巴士、私家車和泥頭車。因此雖然他支持政府覓地興建公營房屋，但他亦希望政府覓地興建公眾停車場和公營街市。

46. 邱玉麟先生表示，他本人為坑口西的當區議員，是計劃中興建最多房屋的選區，當中有不少居民受到受響。將軍澳村反對計劃的其中一個原因為建屋計劃會將鄉村一分為二，寶康路本來已經非常狹窄，重型車輛的臨時停車場在該處興建，有關做法令居民無法接受。此外，署方更在沒有徵求居民意見的情況下將鄉村範圍縮小，因此他建議政府應更有前瞻性地進行規劃。他指出，將軍澳村和魷魚灣村均已沒有土地進行發展。以興建紀律部隊職員宿舍為例，建議獲得通過後，政府便不再跟進議員的訴求，他認為這不是適當的處事方法。

47. 主席希望各政府部門代表聽取議員針對政策所提出的意見，並向上層如實反映。主席表示不會以臨時動議處理議題，並總結表示西貢區議會反對修訂將軍澳分區計劃大綱圖，並反對部門向城規會提交有關修訂項目作考慮。

48. 范國威先生認為主席已準確地掌握各位議員的意見，同時兼顧了市民的意見。他建議修改總結內容為「西貢區議會一致反對」，以增加其代表性。

49. 簡兆祺先生表示，區議會並非一致反對上述建議。

50. 區能發先生同意簡兆祺先生的說法。

51. 方國珊女士表示，她支持興建公營房屋，但事前必須提供足夠配套設施。她建議政府考慮先發展第 137 區，並落實交通配套。在政府未有提供足夠文件的情況下，絕不應向城規會提交申請，因此認為有需要就剛才的臨時動議進行表決。

52. 主席表示，他建議的總結為「西貢區議會明確表示反對修訂將軍澳分區計劃大綱圖，並反對部門向城規會提交有關修訂項目作考慮」，因事實上議會於是次會議反對政府的建議，而政府部門將來亦可就五幅用地提出其他新思維，並交回西貢區議會討論。他認為如逐一處理臨時動議，將不能代表居民或各議員的心聲。

53. 温悅昌先生表示完全同意主席所作的總結，認為不需要加上「一致」二字。

54. 周賢明先生表示，他亦完全同意主席所作的總結，而有個別議員或許持不同的意見，但大意都是希望政府在妥善處理配套問題後才重新提出建屋計劃，因此此刻事實上是持反對意見。

55. 范國威先生表示尊重各位議員的意見。由於下一個諮詢階段署方將會向城規會提交申請，因此認為區議會必須明確地表達立場。

56. 陳繼偉先生表示，他提出的臨時動議措詞為「要求政府提供交通評估、環境評估、全面改善交通／休憩用地／社區設施／民生配套計劃及增加公營街市後，才進一步研究將軍澳興建公營房屋計劃」，與主席的總結殊途同歸，他認為現時最重要是阻止建屋計劃獲得通過。他希望政府部門日後在

符合上述要求後才進一步諮詢區議會。

57. 張美雄先生表示，現時的大前提為阻止這份粗疏的文件呈交上城規會，他認為議員之間應求同存異，因此支持主席所提出的總結。

58. 方國珊女士表示，規劃署和城規會至今仍然沿用過時的《香港規劃標準與準則》，如政府繼續沿用，則香港日後亦難以發展，因此她認為主席應提點政策執行者不要再使用舊有方式進行規劃。

59. 土木工程拓展署蔣年達先生表示，該署和規劃署已聽到各位議員的寶貴意見。

60. 主席總結表示，西貢區議會明確表示反對修訂將軍澳分區計劃大綱圖，並反對部門向城規會提交有關修訂項目作考慮。他請土木工程拓展署和規劃署備悉西貢區議會的意見。

II. 其他事項

(一) 全港青少年繪畫日 2017

(SKDC(M)文件第 112/17 號)

61. 議員備悉會議文件。由於沒有其他意見，主席宣布西貢區議會同意藝育菁英將本會會徽印於上述活動授旗儀式中的旗幟上，而李家良先生將會出席於 2017 年 7 月 8 日中午 12 時正於中環遮打花園廣場舉行的全港青少年繪畫日 2017 開幕典禮。

62. 餘無別事，會議於下午 5 時正結束。

西貢區議會秘書處
2017 年 5 月

Provision of Major Community Facilities in Tseung Kwan O (TKO)

Type of Facilities	Hong Kong Planning Standards and Guidelines (HKPSG)	HKPSG Requirement (based on planned population: about 483,000[1,2])	Provision		Surplus / Shortfall (against planned provision)
			Existing Provision	Planned (existing + proposed) Provision	
District open space	10 ha per 100,000 persons	46.28 ha	28.57 ha	47.46 ha	+1.18 ha
Local open space	10 ha per 100,000 persons	46.28 ha	60.81ha	72.62 ha	+26.34 ha
Secondary school	1 whole day classroom for 40 persons aged 12-17	564 classroom	713 classroom	803 classroom	+239 classroom
Primary school	1 whole day classroom for 25.5 persons aged 6-11	869 classroom	693 classroom	783 classroom	-86[3] classroom
Kindergarten/ nursery	26 classrooms for 1,000 persons aged 3 to under 6	267 classroom	313 classroom	361 classroom	+94 classroom
District police station	1 per 200,000 to 500,000 persons	1	0	0[4]	-1[4]
Divisional police station	1 per 100,000 to 200,000 persons	2	1[4]	2	0
Hospital	5.5 beds/1000 persons	2,657	1,084	1,644	-1,013[5]
Clinic/health centre	1 per 100,000 persons	5	2	4	-1[6]
Magistracy (with 8 courtrooms)	1 per 660,000 persons	1	0	0	-1[7]
Integrated children and youth services centre	1 for 12,000 persons aged 6-24	6	10	10	+4
Integrated family services centre	1 for 100,000 to 150,000 persons	3	4	5	+2
Library	1 branch library for 200,000 persons	2	2	2	0

Type of Facilities	**Hong Kong Planning Standards and Guidelines (HKPSG)**	**HKPSG Requirement (based on planned population: about 483,000[1,2])**	**Provision**		**Surplus / Shortfall (against planned provision)**
			Existing Provision	**Planned (existing + proposed) Provision**	
Sports centre	1 per 50,000 to 65,000 persons	7	6	8	+1
Sports ground/sport complex	1 per 200,000 to 250,000 persons	2	1	1	-1
Swimming pool – standard	1 complex per 287,000 persons	2	1	1	-1[8]

Remarks:

1. "Planned Population" is estimated based on the existing population and future population generated from known and planned residential developments (i.e. including the estimated population of 5 proposed public housing sites).
2. Depends on the nature of the community facilities, different population categories will be used for estimating GIC requirements ("Planned Population" may include Usual Residents and/or Mobile Residents and/or Transients.)
3. According to email of 23.3.2017 from the Education Bureau (EDB), it is anticipated that there will be surplus supply of public sector primary school places in Sai Kung District and over-provision of public sector secondary school places will not change for quite a while. EDB will keep reviewing the latest population projections in the district, the developments of the housing estates in the territory, as well as the supply and demand of schools places in Sai Kung District, and launch the school building programmes concerned as and when appropriate. As there is a surplus of secondary school classrooms, close liaison with EDB is being maintained to process proposals to convert school premises for post-secondary educational uses and address the deficit of primary school classrooms.
4. According to email of 22.2.2017 from Commissioner of Police. TKO Divisional Police Station in Area 21 is planned to be upgraded to District Police Station in late 2017.
5. According to the email of 20.7.2017 from the Food and Health Bureau (FHB), Hospital Authority (HA) has taken into account a number of factors in planning for its services, including the increase of service demand as a result of population growth and demographic changes, advancement of medical technology, manpower availability as well as organization of services of the clusters and hospitals and the service demand of local community. HA plans its services on cluster basis. Hospitals in the cluster (including the Kowloon East Cluster which covers TKO and other districts) are playing different roles and supplement each other to provide a comprehensive range of services to the residents in the catchment area. Under the ten-year Hospital Development Plan, the Haven of Hope Hospital is undergoing expansion. Upon project completion in 2021, the hospital will provide, among others, 160 additional beds; and the United Christian Hospital is also undergoing expansion. Upon project completion in 2023, the hospital will provide, among others, 560 additional beds. The Chief Executive announced in the 2014 Policy Address that the Government has reserved a site in Pak Shing Kok, TKO (i.e. TKO Area 78) to develop a Chinese medicine hospital (about 400 beds). FHB has invited interested non-profit making organizations to submit Expression of Interest.
6. According to email of 13.7.2017 from FHB, a number of factors are taken into account in planning for the provision of public primary care services, including population growth, demographic changes, supply of services and healthcare services utilization pattern, so as to formulate service development plans which better cope with the demand of the community. FHB will continue to closely monitor the service demand in the Sai Kung District, with a view to planning and developing the necessary clinic facilities.
7. According to email of 11.11.2015 from Judiciary, they have made no bid for a magistracy in TKO.
8. According to email of 31.3.2017 from Leisure and Cultural Services Department, the Sports Centre-Cum-Indoor Heated Swimming Pools in Area 65B will provide swimming pool to meet the shortfall of facilities for swimming.

西貢區
Sai Kung District

項目A ITEM A
地點1 (SKI-1)
將軍澳村以北
SITE 1 (SKI-1)
NORTH OF TSEUNG KWAN O VILLAGE

項目D ITEM D
地點4 (SKI-11)
魚灣村以西
SITE 4 (SKI-11)
WEST OF YAU YUE WAN VILLAGE

項目B ITEM B
地點2 (SKI-2)
影業路以西北
SITE 2 (SKI-2)
NORTHWEST OF YING YIP ROAD

地點6 (SKI-3)
翠林邨以西
SITE 6 (SKI-3)
WEST OF TSUI LAM ESTATE

地點9 (SKI-4)
康盛花園以南巴士總站及茅湖仔以北
SITE 9 (SKI-4)
BUS TERMINUS SOUTH OF HONG SING GARDEN AND NORTH OF MAU WU TSAI

項目C ITEM C
地點3 (SKI-6)
昭信路以南
SITE 3 (SKI-6)
SOUTH OF CHIU SHUN ROAD

地點8 (SKI-13)
寶琳路以南
SITE 8 (SKI-13)
SOUTH OF PO LAM ROAD

地點7 (SKI-5)
寶琳南路以北
SITE 7 (SKI-5)
NORTH OF PO LAM ROAD SOUTH

項目E ITEM E
地點5 (SKI-12)
香港電影城以東
SITE 5 (SKI-12)
EAST OF HONG KONG MOVIE CITY

圖例 LEGEND

- 建議先改劃土地用途的地點 SITES TO BE REZONED WITH PRIORITY
- 地點有待進一步研究 SITES SUBJECT TO FURTHER STUDY
- 地方行政區分界 DISTRICT BOUNDARY
- 無人駕駛航拍照片的觀景點 VIEWING POINT OF UAV PHOTO

地點界線只作識別用
SITE BOUNDARY FOR IDENTIFICATION PURPOSE ONLY

100 現存建築物樓頂高度(在主水平基準上若干米)
EXISTING BUILDING TOP LEVEL (in m above PD)

本摘要圖於2017年6月1日擬備，
所根據的資料為地形圖組別HM20C
編號 11 及 12
EXTRACT PLAN PREPARED ON 1.6.2017
BASED ON TOPOGRAPHIC MAP
SERIES HM20C SHEETS No. 11 & 12

位置圖 LOCATION PLAN

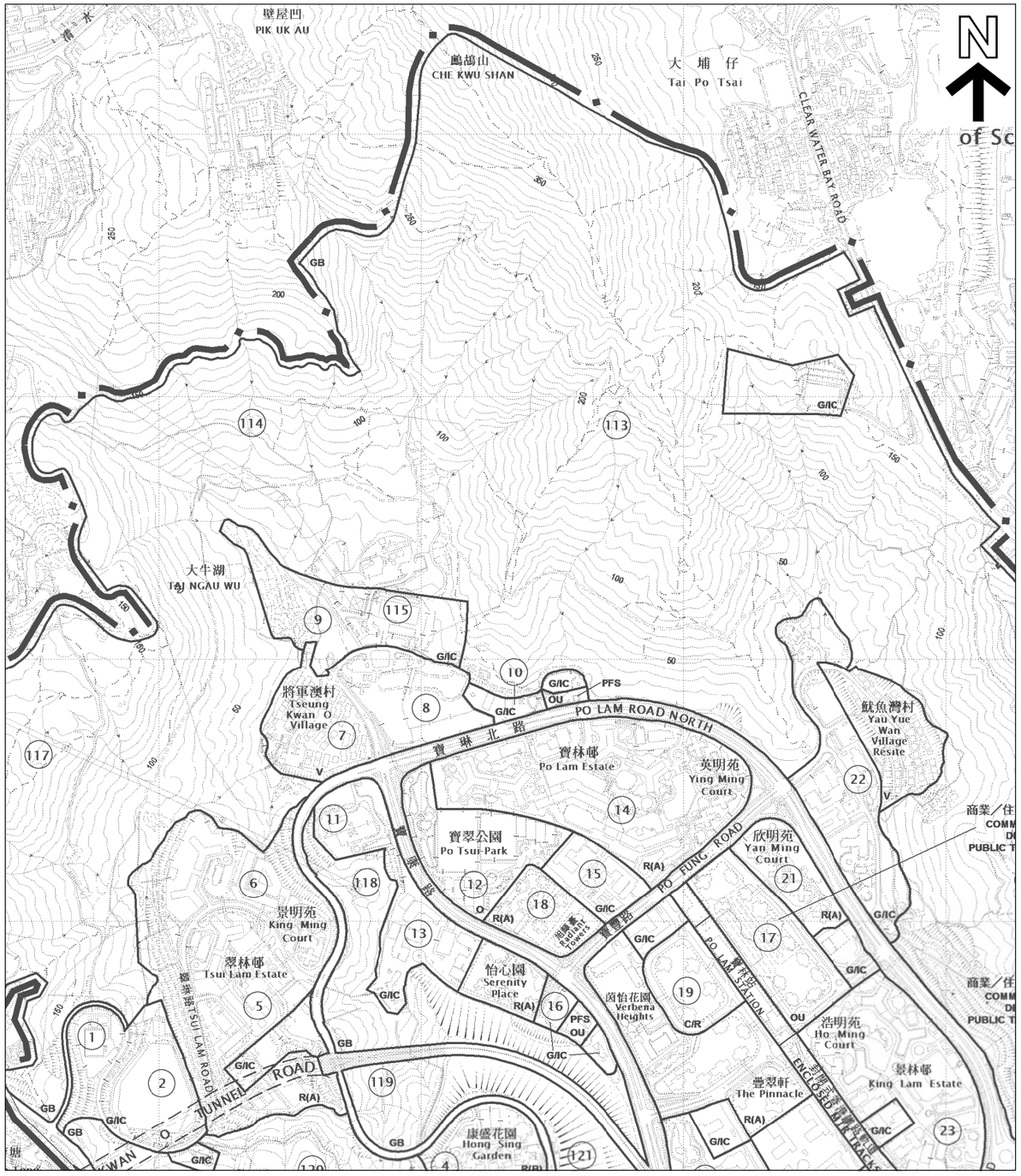
已核准的將軍澳分區計劃大綱圖
編號 S/TKO/24 的擬議修訂
PROPOSED AMENDMENTS TO
THE APPROVED TSEUNG KWAN O
OUTLINE ZONING PLAN No. S/TKO/24

SCALE 1 : 20 000 比例尺
米 METRES 500 0 500 1000 1500 2000 米 METRES

規劃署
PLANNING DEPARTMENT

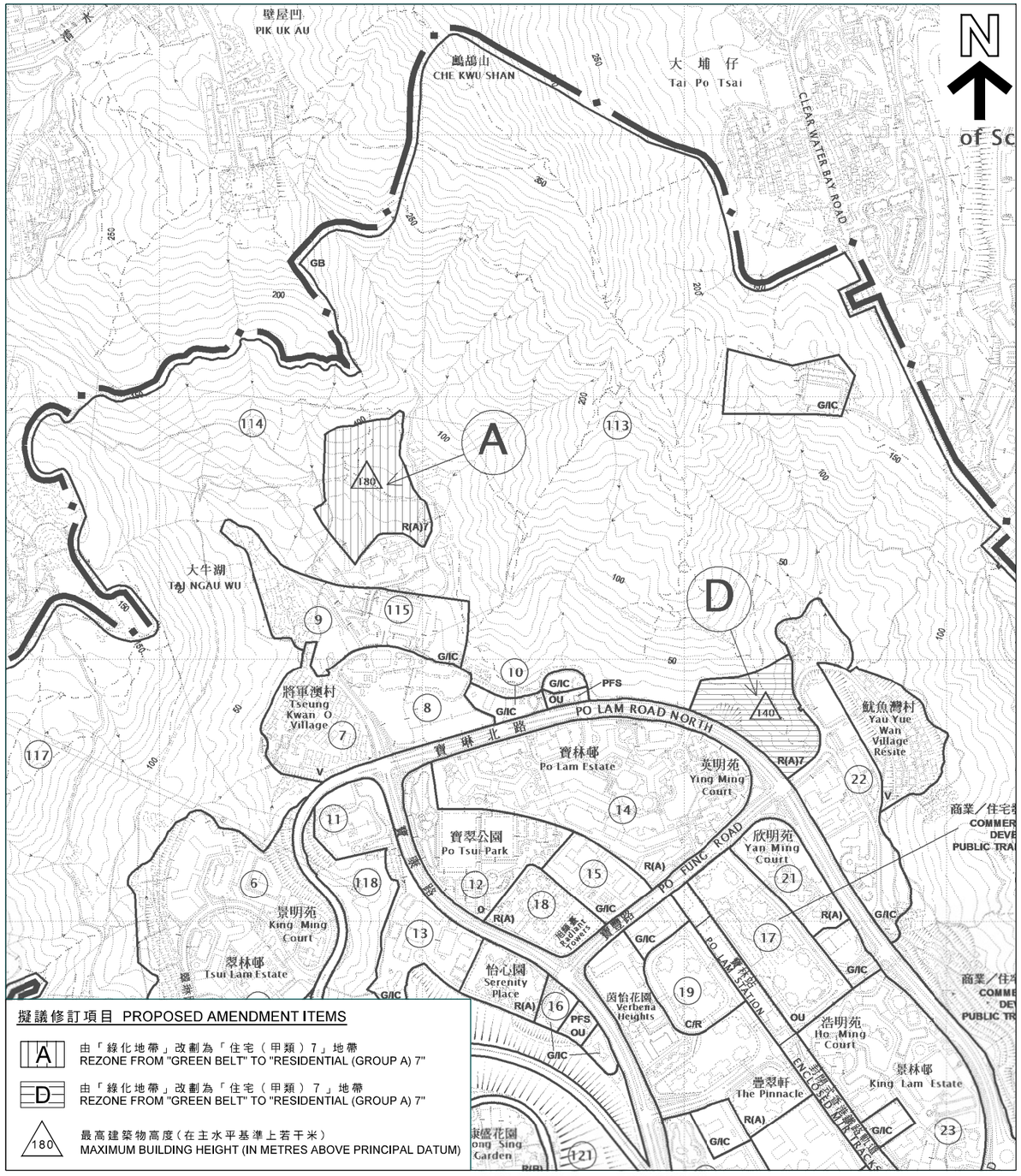
參考編號
REFERENCE No.
M/TKO/17/58

圖 PLAN
1



核准的將軍澳分區計劃大綱圖編號 S/TKO/24
APPROVED TSEUNG KWAN O OUTLINE ZONING PLAN No. S/TKO/24

地點界線只作識別用
SITE BOUNDARY
FOR IDENTIFICATION PURPOSE ONLY



擬議修訂項目 PROPOSED AMENDMENT ITEMS

A — 由「綠化地帶」改劃為「住宅（甲類）7」地帶
REZONE FROM "GREEN BELT" TO "RESIDENTIAL (GROUP A) 7"

D — 由「綠化地帶」改劃為「住宅（甲類）7」地帶
REZONE FROM "GREEN BELT" TO "RESIDENTIAL (GROUP A) 7"

180 — 最高建築物高度（在主水平基準上若干米）
MAXIMUM BUILDING HEIGHT (IN METRES ABOVE PRINCIPAL DATUM)

核准的將軍澳分區計劃大綱圖編號 S/TKO/24 的擬議修訂
PROPOSED AMENDMENTS TO THE APPROVED
TSEUNG KWAN O OUTLINE ZONING PLAN No. S/TKO/24

本摘要圖於2017年6月1日擬備，所根據的資料為
於2017年3月14日核准的分區計劃大綱圖編號S/TKO/24
EXTRACT PLAN PREPARED ON 1.6.2017
BASED ON OUTLINE ZONING PLAN
No. S/TKO/24 APPROVED ON 14.3.2017

位置圖 LOCATION PLAN

已核准的將軍澳分區計劃大綱圖編號 S/TKO/24 的擬議修訂
PROPOSED AMENDMENTS TO THE APPROVED
TSEUNG KWAN O OUTLINE ZONING PLAN No. S/TKO/24

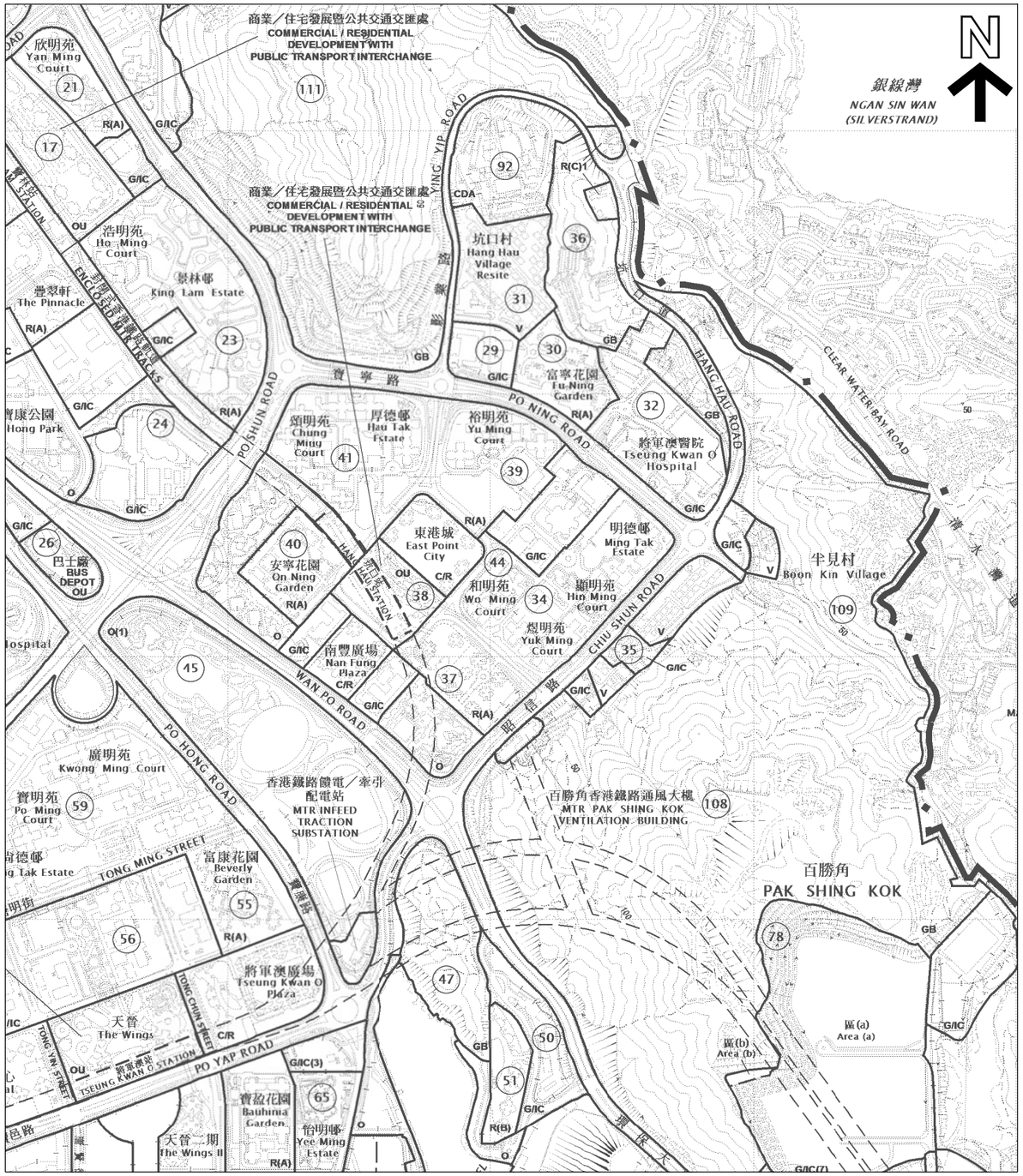
SCALE 1 : 10 000 比例尺

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

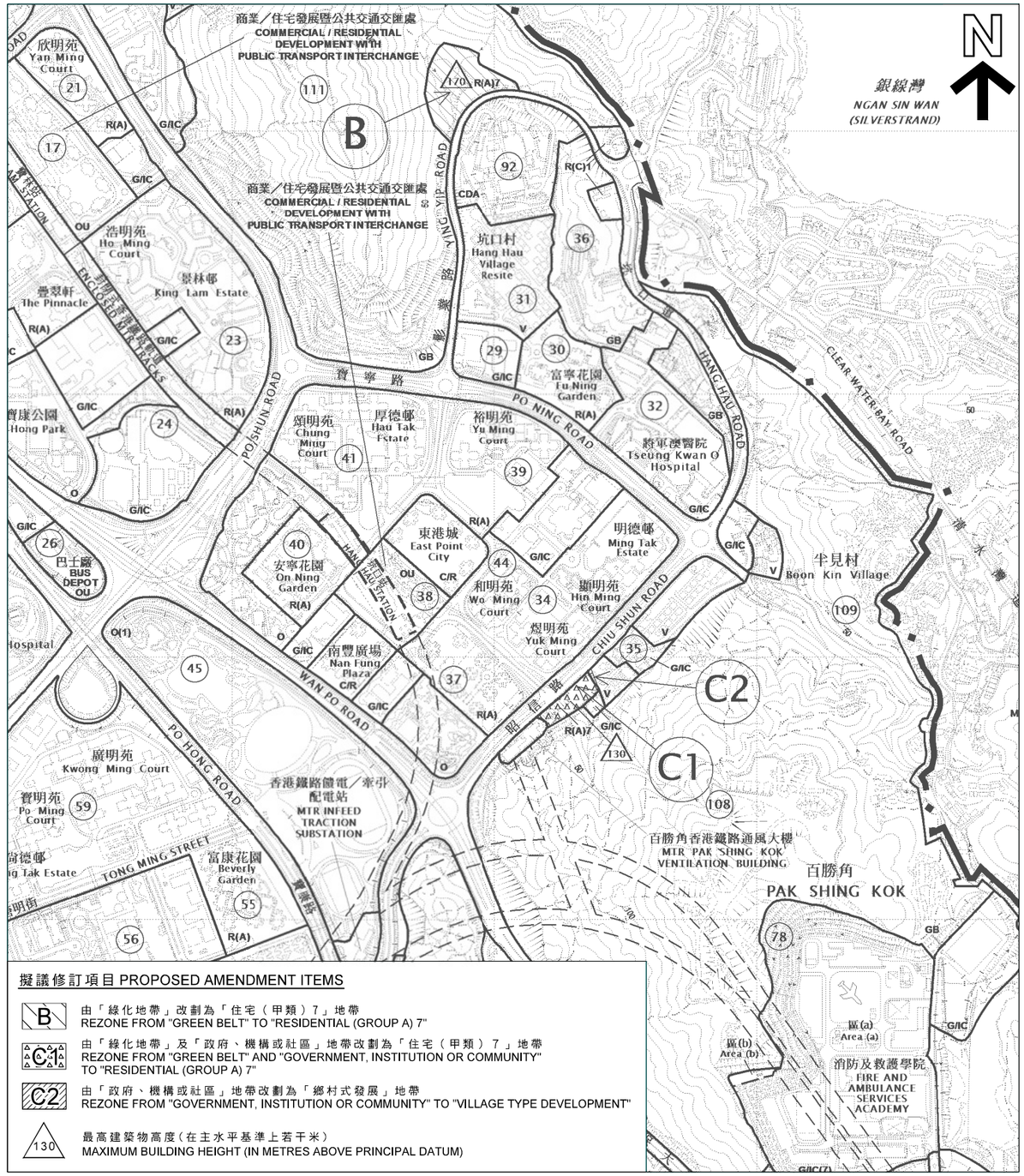
規劃署
PLANNING DEPARTMENT

參考編號
REFERENCE No.
M/TKO/17/58

圖 PLAN
2a



核准的將軍澳分區計劃大綱圖編號 S/TKO/24
APPROVED TSEUNG KWAN O OUTLINE ZONING PLAN No. S/TKO/24



擬議修訂項目 PROPOSED AMENDMENT ITEMS

- B — 由「綠化地帶」改劃為「住宅（甲類）7」地帶
  REZONE FROM "GREEN BELT" TO "RESIDENTIAL (GROUP A) 7"
- C1 — 由「綠化地帶」及「政府、機構或社區」地帶改劃為「住宅（甲類）7」地帶
  REZONE FROM "GREEN BELT" AND "GOVERNMENT, INSTITUTION OR COMMUNITY" TO "RESIDENTIAL (GROUP A) 7"
- C2 — 由「政府、機構或社區」地帶改劃為「鄉村式發展」地帶
  REZONE FROM "GOVERNMENT, INSTITUTION OR COMMUNITY" TO "VILLAGE TYPE DEVELOPMENT"
- 130 — 最高建築物高度（在主水平基準上若干米）
  MAXIMUM BUILDING HEIGHT (IN METRES ABOVE PRINCIPAL DATUM)

核准的將軍澳分區計劃大綱圖編號 S/TKO/24 的擬議修訂
PROPOSED AMENDMENTS TO THE APPROVED TSEUNG KWAN O OUTLINE ZONING PLAN No. S/TKO/24

地點界線只作識別用
SITE BOUNDARY
FOR IDENTIFICATION PURPOSE ONLY

本摘要圖於2017年6月1日擬備，所根據的資料為
於2017年3月14日核准的分區計劃大綱圖編號S/TKO/24
EXTRACT PLAN PREPARED ON 1.6.2017
BASED ON OUTLINE ZONING PLAN
No. S/TKO/24 APPROVED ON 14.3.2017

位置圖 LOCATION PLAN

已核准的將軍澳分區計劃大綱圖編號 S/TKO/24 的擬議修訂
PROPOSED AMENDMENTS TO THE APPROVED
TSEUNG KWAN O OUTLINE ZONING PLAN No. S/TKO/24

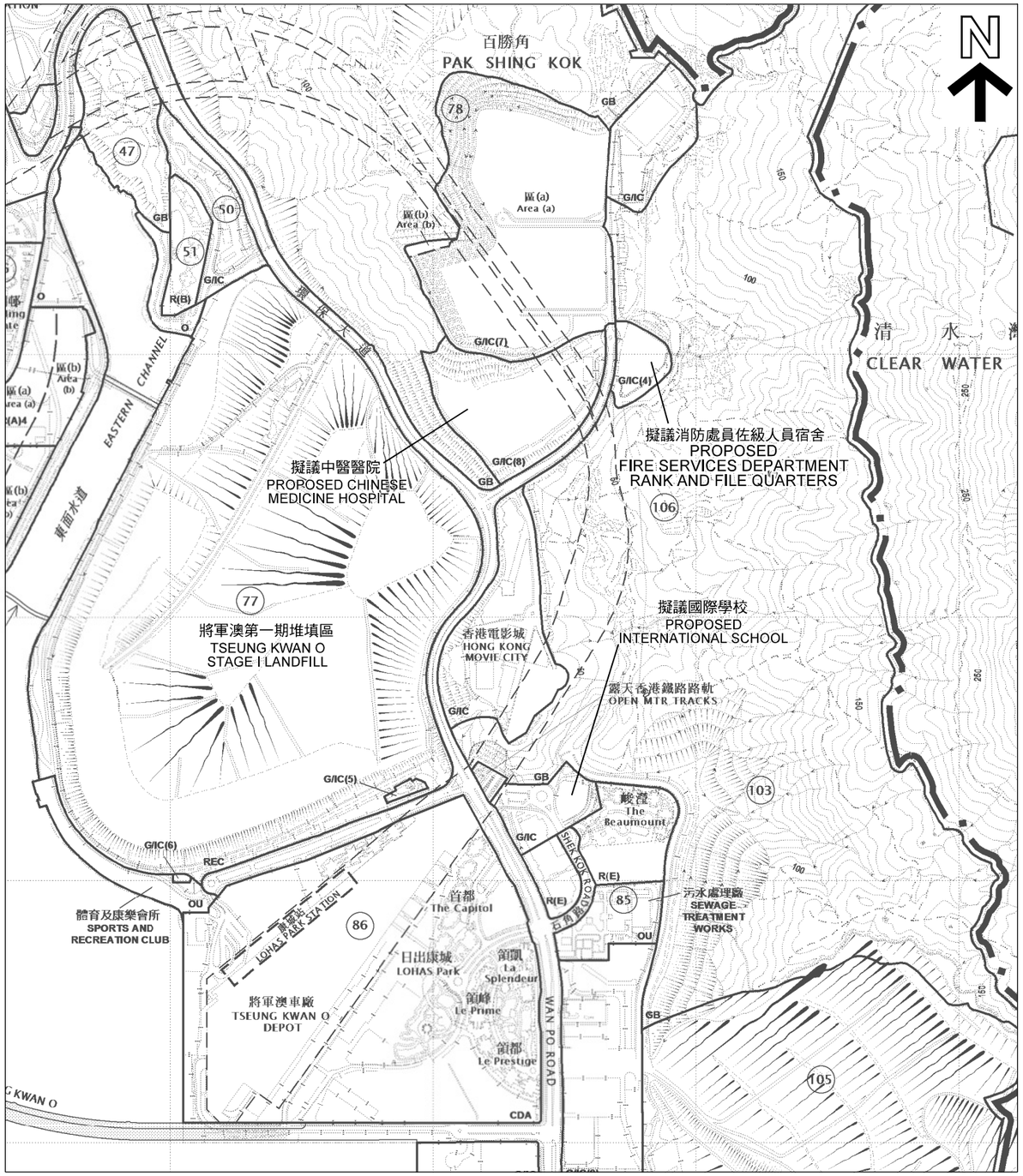
SCALE 1 : 10 000 比例尺

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

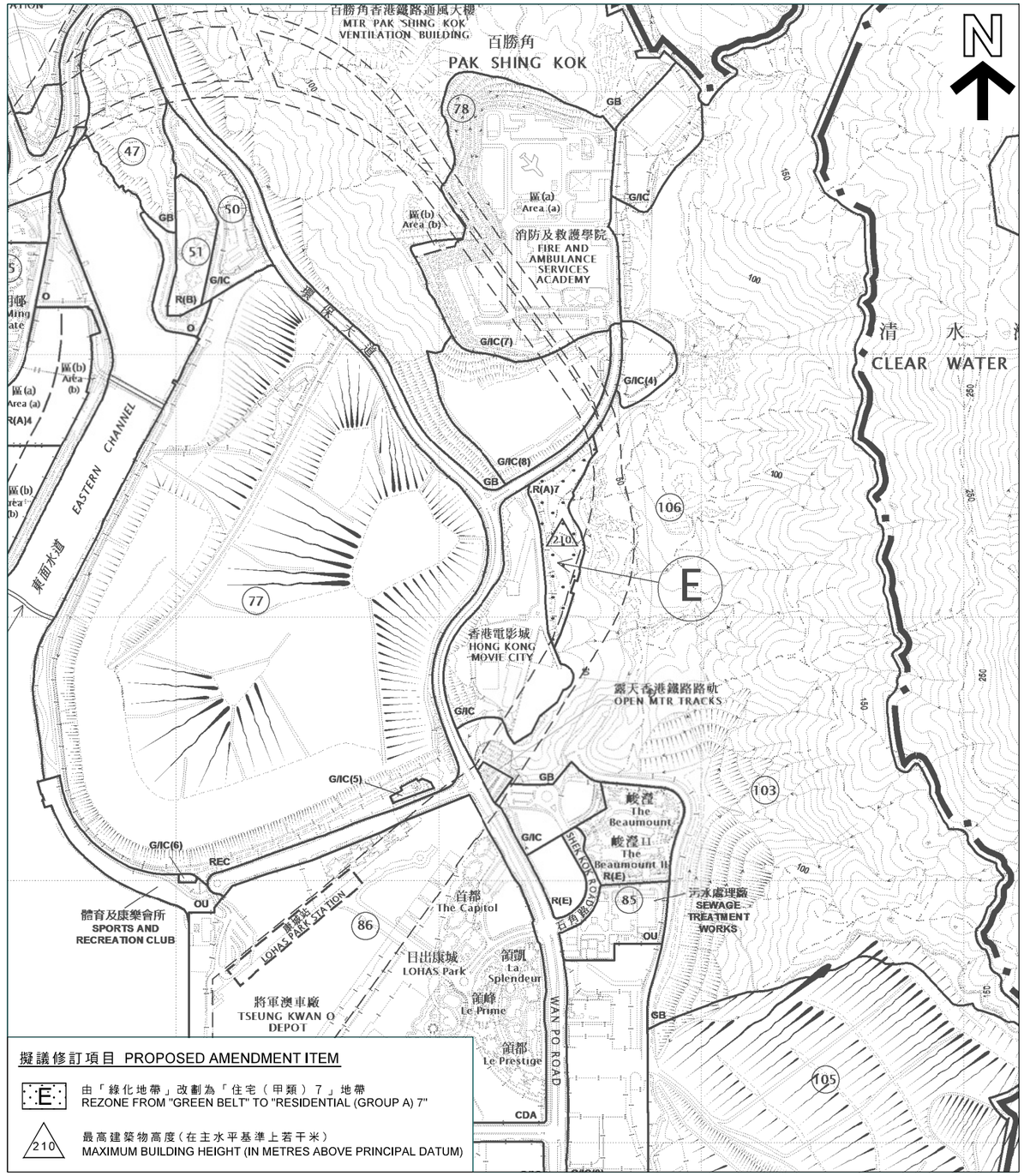
規劃署
PLANNING DEPARTMENT

參考編號
REFERENCE No.
M/TKO/17/58

圖 PLAN
2b



核准的將軍澳分區計劃大綱圖編號 S/TKO/24
APPROVED TSEUNG KWAN O OUTLINE ZONING PLAN No. S/TKO/24



核准的將軍澳分區計劃大綱圖編號 S/TKO/24 的擬議修訂
PROPOSED AMENDMENT TO THE APPROVED TSEUNG KWAN O OUTLINE ZONING PLAN No. S/TKO/24

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於2017年3月14日核准的分區計劃大綱圖編號S/TKO/24
EXTRACT PLAN PREPARED ON 1.6.2017
BASED ON OUTLINE ZONING PLAN
No. S/TKO/24 APPROVED ON 14.3.2017

位置圖 LOCATION PLAN

已核准的將軍澳分區計劃大綱圖編號 S/TKO/24 的擬議修訂
PROPOSED AMENDMENTS TO THE APPROVED
TSEUNG KWAN O OUTLINE ZONING PLAN No. S/TKO/24

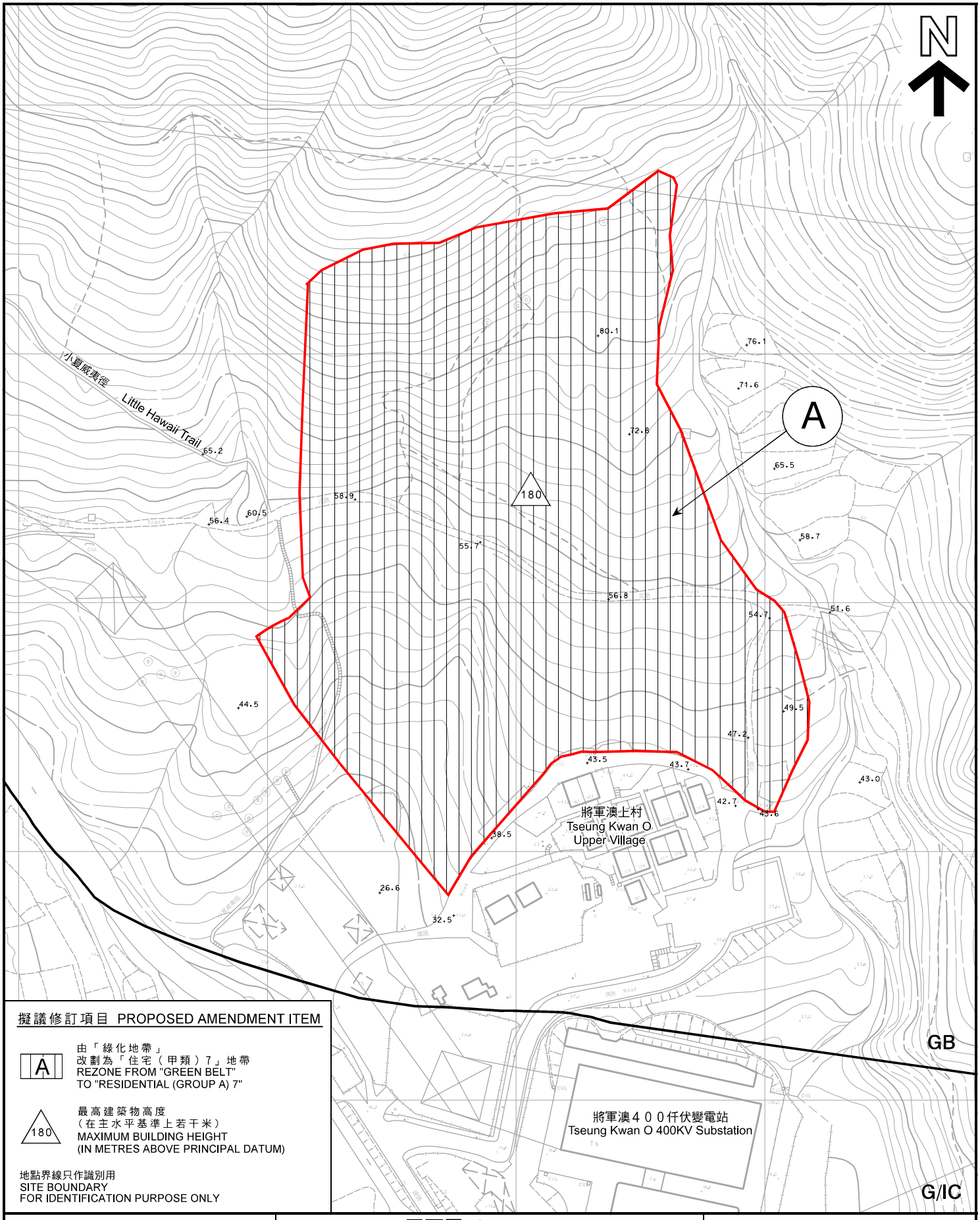
SCALE 1 : 10 000 比例尺

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

規劃署
PLANNING DEPARTMENT

參考編號
REFERENCE No.
M/TKO/17/58

圖 PLAN
2c



擬議修訂項目 PROPOSED AMENDMENT ITEM

A
由「綠化地帶」
改劃為「住宅（甲類）7」地帶
REZONE FROM "GREEN BELT"
TO "RESIDENTIAL (GROUP A) 7"

180
最高建築物高度
（在主水平基準上若干米）
MAXIMUM BUILDING HEIGHT
(IN METRES ABOVE PRINCIPAL DATUM)

地點界線只作識別用
SITE BOUNDARY
FOR IDENTIFICATION PURPOSE ONLY

本摘要圖於2017年6月1日擬備，
所根據的資料為測量圖編號
11-NE-15A

EXTRACT PLAN PREPARED ON 1.6.2017
BASED ON SURVEY SHEET No.
11-NE-15A

平面圖 SITE PLAN

地點1（SKI-1）：將軍澳村以北
已核准的將軍澳分區計劃大綱圖
編號 S/TKO/24 的擬議修訂

SITE 1 (SKI-1) : NORTH OF TSEUNG KWAN O VILLAGE
PROPOSED AMENDMENTS TO
THE APPROVED TSEUNG KWAN O
OUTLINE ZONING PLAN No. S/TKO/24

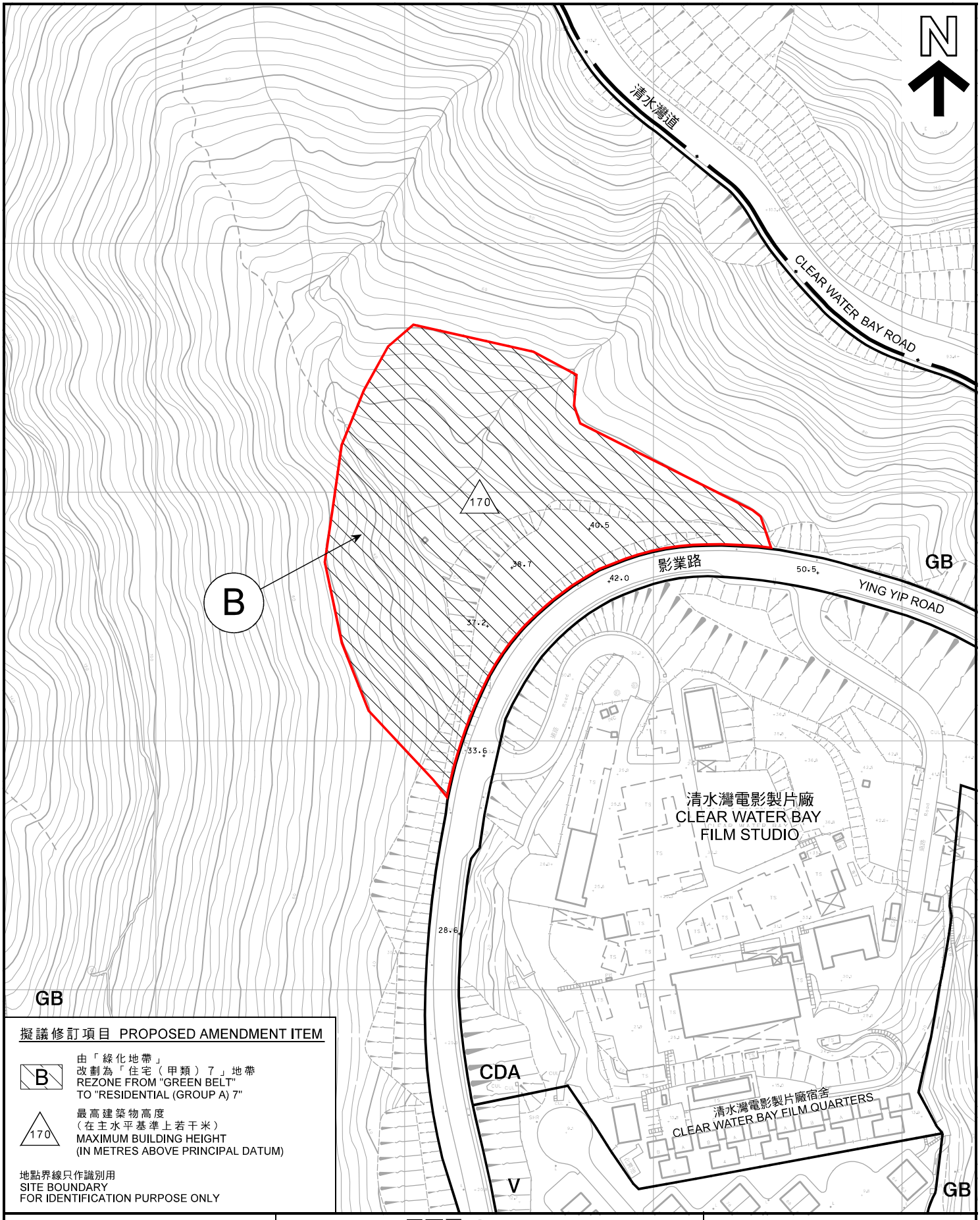
SCALE 1 : 2 000 比例尺

米 METRES 40 0 40 80 米 METRES

規劃署
PLANNING DEPARTMENT

參考編號
REFERENCE No.
M/TKO/17/58

圖 PLAN
3a



擬議修訂項目 PROPOSED AMENDMENT ITEM

B
由「綠化地帶」
改劃為「住宅（甲類）7」地帶
REZONE FROM "GREEN BELT"
TO "RESIDENTIAL (GROUP A) 7"

170
最高建築物高度
（在主水平基準上若干米）
MAXIMUM BUILDING HEIGHT
(IN METRES ABOVE PRINCIPAL DATUM)

地點界線只作識別用
SITE BOUNDARY
FOR IDENTIFICATION PURPOSE ONLY

本摘要圖於2017年6月1日擬備，
所根據的資料為測量圖編號
12-NW-11C和16A

EXTRACT PLAN PREPARED ON 1.6.2017
BASED ON SURVEY SHEETS No.
12-NW-11C & 16A

平面圖 SITE PLAN

地點2（SKI-2）：影業路以西北
已核准的將軍澳分區計劃大綱圖
編號 S/TKO/24 的擬議修訂

SITE 2 (SKI-2) : NORTHWEST OF YING YIP ROAD
PROPOSED AMENDMENTS TO
THE APPROVED TSEUNG KWAN O
OUTLINE ZONING PLAN No. S/TKO/24

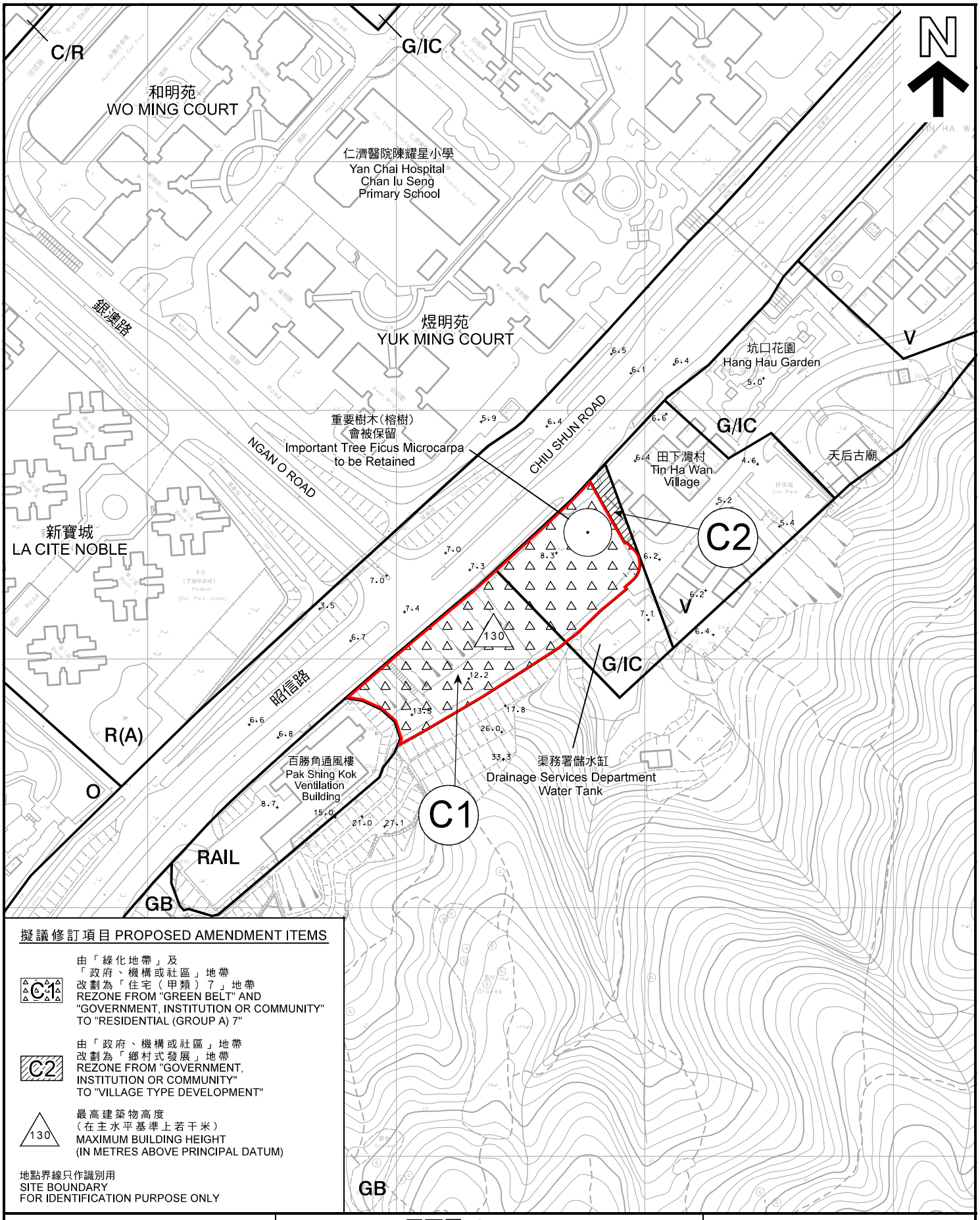
SCALE 1 : 2 000 比例尺

米 METRES 40 0 40 80 米 METRES

規劃署
PLANNING
DEPARTMENT

參考編號
REFERENCE No.
M/TKO/17/58

圖 PLAN
3b



擬議修訂項目 PROPOSED AMENDMENT ITEMS

C1 由「綠化地帶」及「政府、機構或社區」地帶改劃為「住宅（甲類）7」地帶
REZONE FROM "GREEN BELT" AND "GOVERNMENT, INSTITUTION OR COMMUNITY" TO "RESIDENTIAL (GROUP A) 7"

C2 由「政府、機構或社區」地帶改劃為「鄉村式發展」地帶
REZONE FROM "GOVERNMENT, INSTITUTION OR COMMUNITY" TO "VILLAGE TYPE DEVELOPMENT"

130 最高建築物高度（在主水平基準上若干米）
MAXIMUM BUILDING HEIGHT (IN METRES ABOVE PRINCIPAL DATUM)

地點界線只作識別用
SITE BOUNDARY
FOR IDENTIFICATION PURPOSE ONLY

本摘要圖於2017年6月1日擬備，所根據的資料為測量圖編號 12-NW-16C、D、21A和B
EXTRACT PLAN PREPARED ON 1.6.2017 BASED ON SURVEY SHEETS No. 12-NW-16C, D, 21A & B

平面圖 SITE PLAN

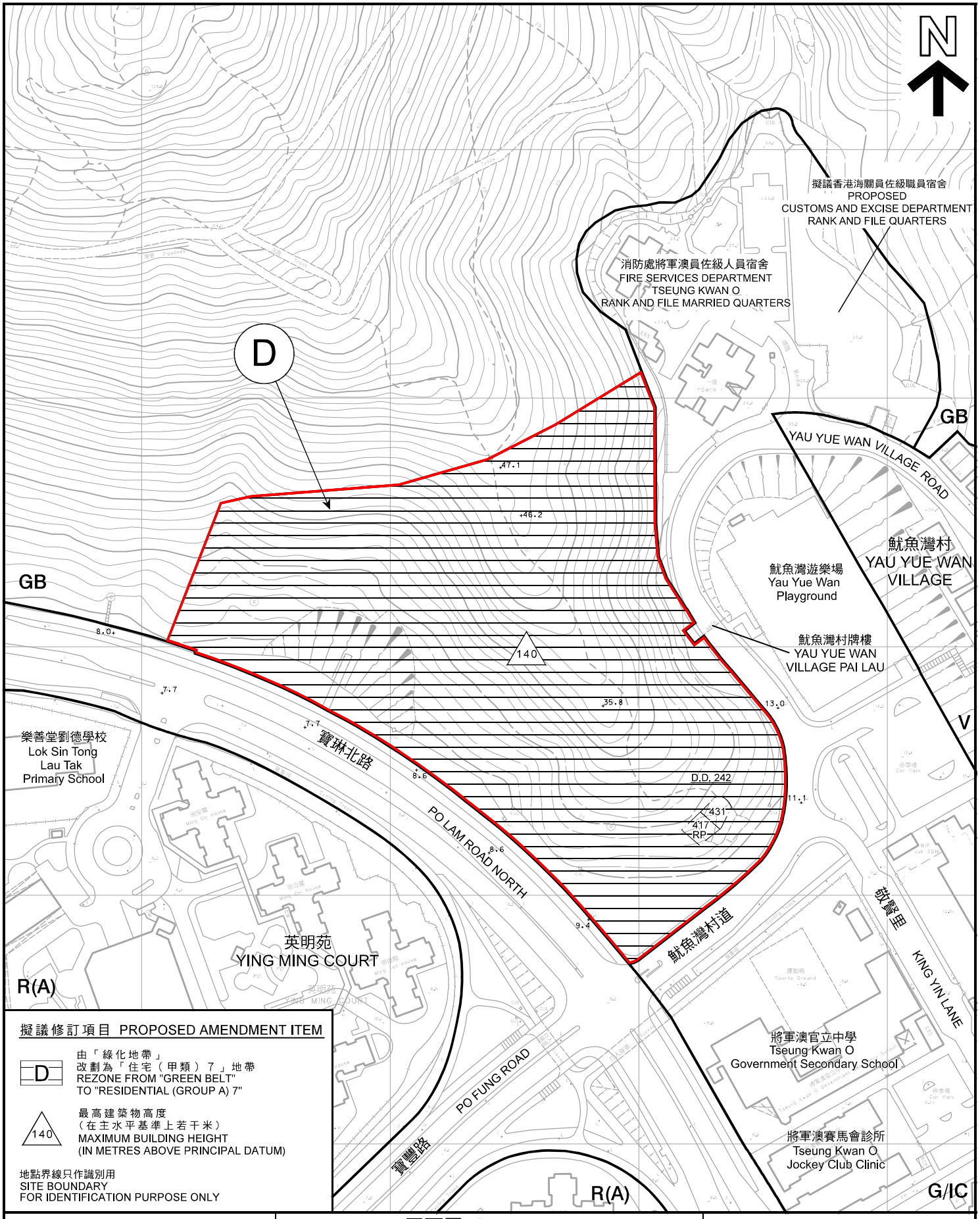
地點3 (SKI-6)：昭信路以南
已核准的將軍澳分區計劃大綱圖
編號 S/TKO/24 的擬議修訂
SITE 3 (SKI-6) : SOUTH OF CHIU SHUN ROAD
PROPOSED AMENDMENTS TO
THE APPROVED TSEUNG KWAN O
OUTLINE ZONING PLAN No. S/TKO/24

SCALE 1 : 2 000 比例尺
米 METRES 40 0 40 80 米 METRES

規劃署
PLANNING DEPARTMENT

參考編號
REFERENCE No.
M/TKO/17/58

圖 PLAN
3c



擬議修訂項目 PROPOSED AMENDMENT ITEM

D — 由「綠化地帶」改劃為「住宅（甲類）7」地帶
REZONE FROM "GREEN BELT" TO "RESIDENTIAL (GROUP A) 7"

140 — 最高建築物高度（在主水平基準上若干米）
MAXIMUM BUILDING HEIGHT (IN METRES ABOVE PRINCIPAL DATUM)

地點界線只作識別用
SITE BOUNDARY
FOR IDENTIFICATION PURPOSE ONLY

本摘要圖於2017年6月1日擬備，所根據的資料為測量圖編號
11-NE-15B和D

EXTRACT PLAN PREPARED ON 1.6.2017
BASED ON SURVEY SHEETS No.
11-NE-15B & D

平面圖 SITE PLAN

地點4 (SKI-11) ： 鮫魚灣村以西
已核准的將軍澳分區計劃大綱圖
編號 S/TKO/24 的擬議修訂

SITE 4 (SKI-11) : WEST OF YAU YUE WAN VILLAGE
PROPOSED AMENDMENTS TO
THE APPROVED TSEUNG KWAN O
OUTLINE ZONING PLAN No. S/TKO/24

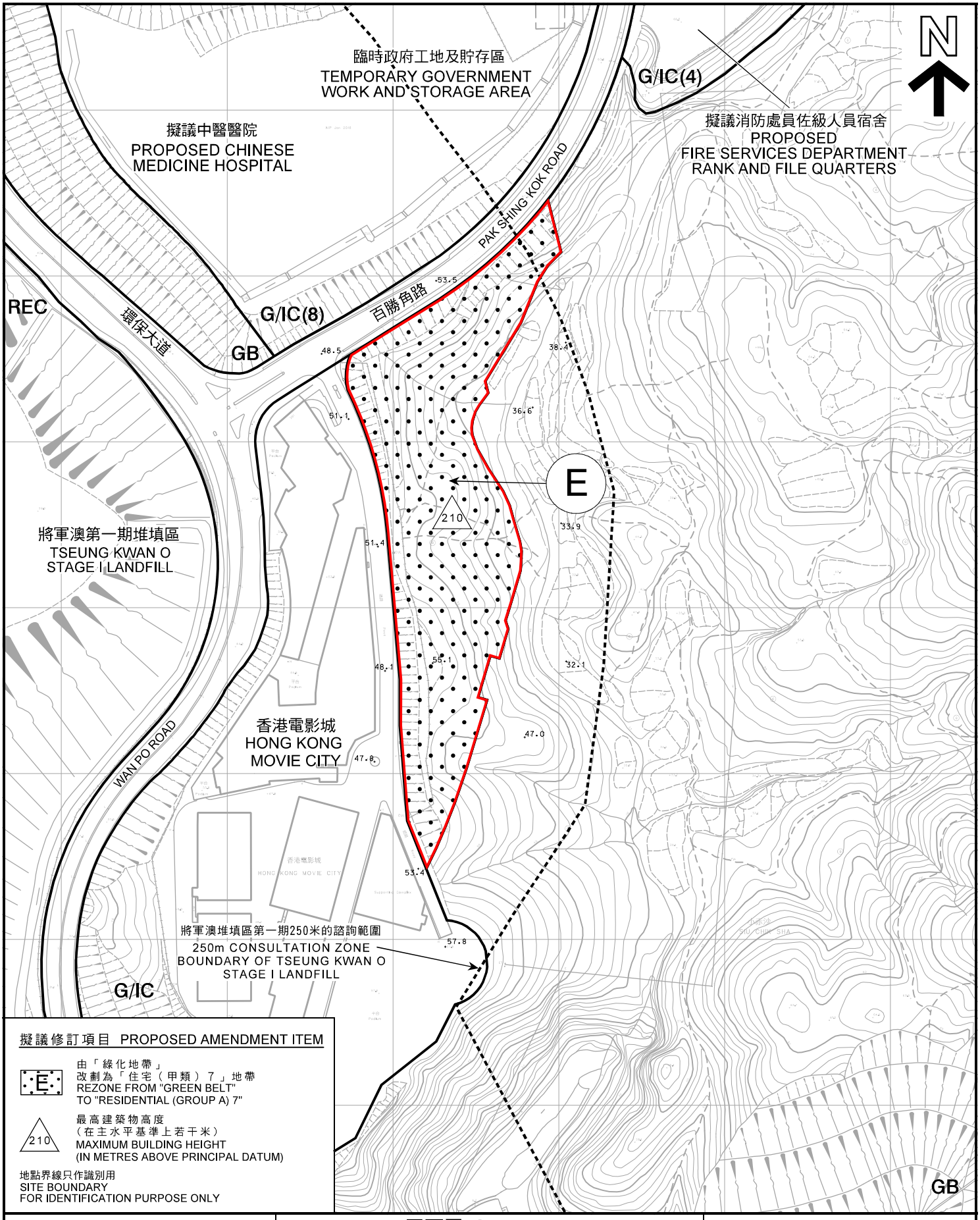
SCALE 1 : 2 000 比例尺

米 METRES 40 0 40 80 米 METRES

規劃署
PLANNING DEPARTMENT

參考編號
REFERENCE No.
M/TKO/17/58

圖 PLAN
3d



擬議修訂項目 PROPOSED AMENDMENT ITEM

E — 由「綠化地帶」改劃為「住宅（甲類）7」地帶
REZONE FROM "GREEN BELT" TO "RESIDENTIAL (GROUP A) 7"

210 — 最高建築物高度（在主水平基準上若干米）
MAXIMUM BUILDING HEIGHT (IN METRES ABOVE PRINCIPAL DATUM)

地點界線只作識別用
SITE BOUNDARY
FOR IDENTIFICATION PURPOSE ONLY

本摘要圖於2017年6月1日擬備，
所根據的資料為測量圖編號
12-NW-21D和22C, 12-SW-1B和2A

EXTRACT PLAN PREPARED ON 1.6.2017
BASED ON SURVEY SHEETS No.
12-NW-21D & 22C, 12-SW-1B & 2A

平面圖 SITE PLAN

地點5 (SKI-12)：香港電影城以東
已核准的將軍澳分區計劃大綱圖
編號 S/TKO/24 的擬議修訂

SITE 5 (SKI-12) : EAST OF HONG KONG MOVIE CITY
PROPOSED AMENDMENTS TO
THE APPROVED TSEUNG KWAN O
OUTLINE ZONING PLAN No. S/TKO/24

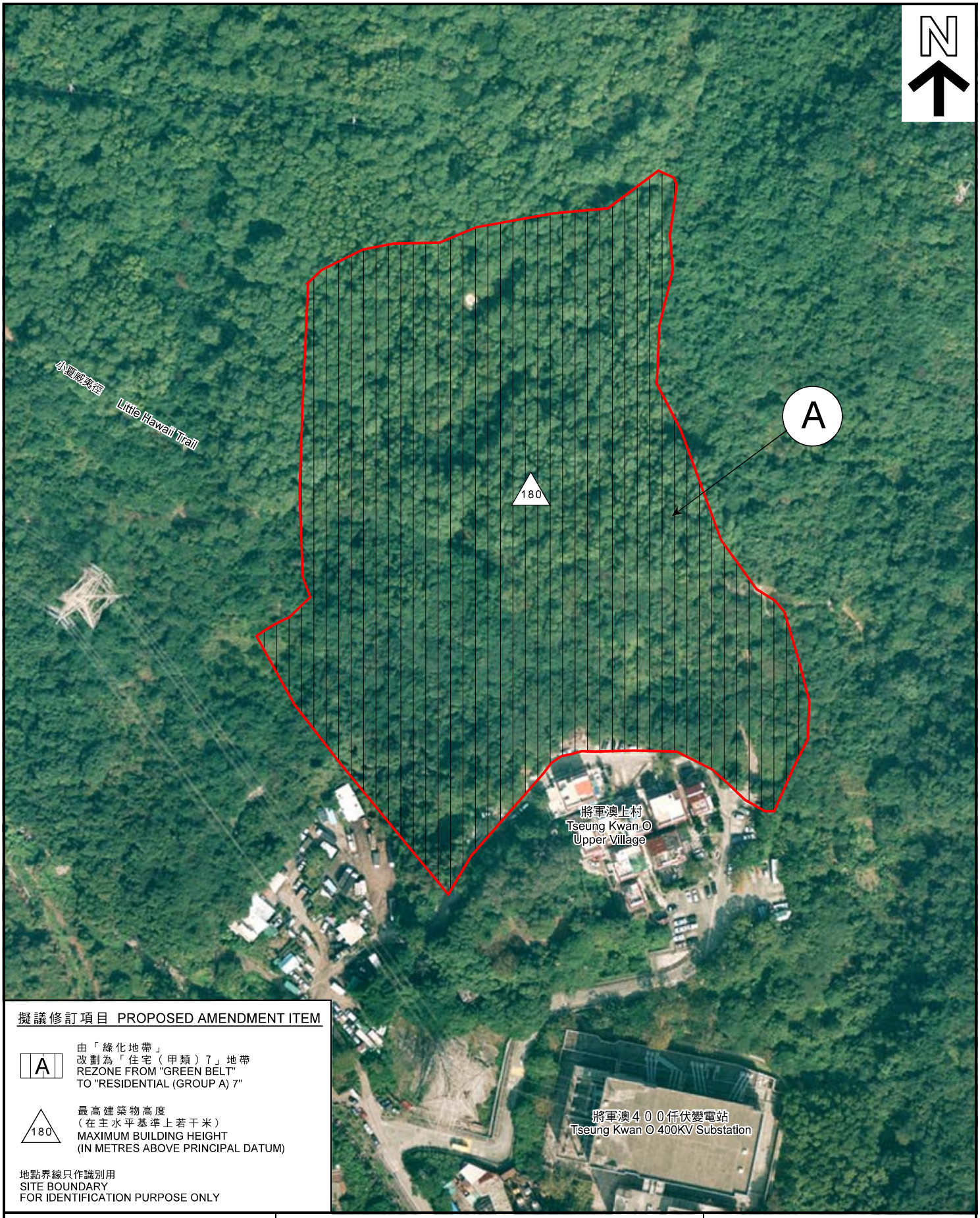
SCALE 1 : 3 000 比例尺

米 METRES 60 0 60 120 米 METRES

規劃署
PLANNING DEPARTMENT

參考編號
REFERENCE No.
M/TKO/17/58

圖 PLAN
3e



擬議修訂項目 PROPOSED AMENDMENT ITEM

A
由「綠化地帶」
改劃為「住宅（甲類）7」地帶
REZONE FROM "GREEN BELT"
TO "RESIDENTIAL (GROUP A) 7"

180
最高建築物高度
（在主水平基準上若干米）
MAXIMUM BUILDING HEIGHT
(IN METRES ABOVE PRINCIPAL DATUM)

地點界線只作識別用
SITE BOUNDARY
FOR IDENTIFICATION PURPOSE ONLY

本摘要圖於2017年6月1日擬備，
所根據的資料為地政總署
於2016年1月8日拍得的
航攝照片編號CS63167
EXTRACT PLAN PREPARED ON 1.6.2017
BASED ON AERIAL PHOTO No.
CS63167 TAKEN ON 8.1.2016
BY LANDS DEPARTMENT

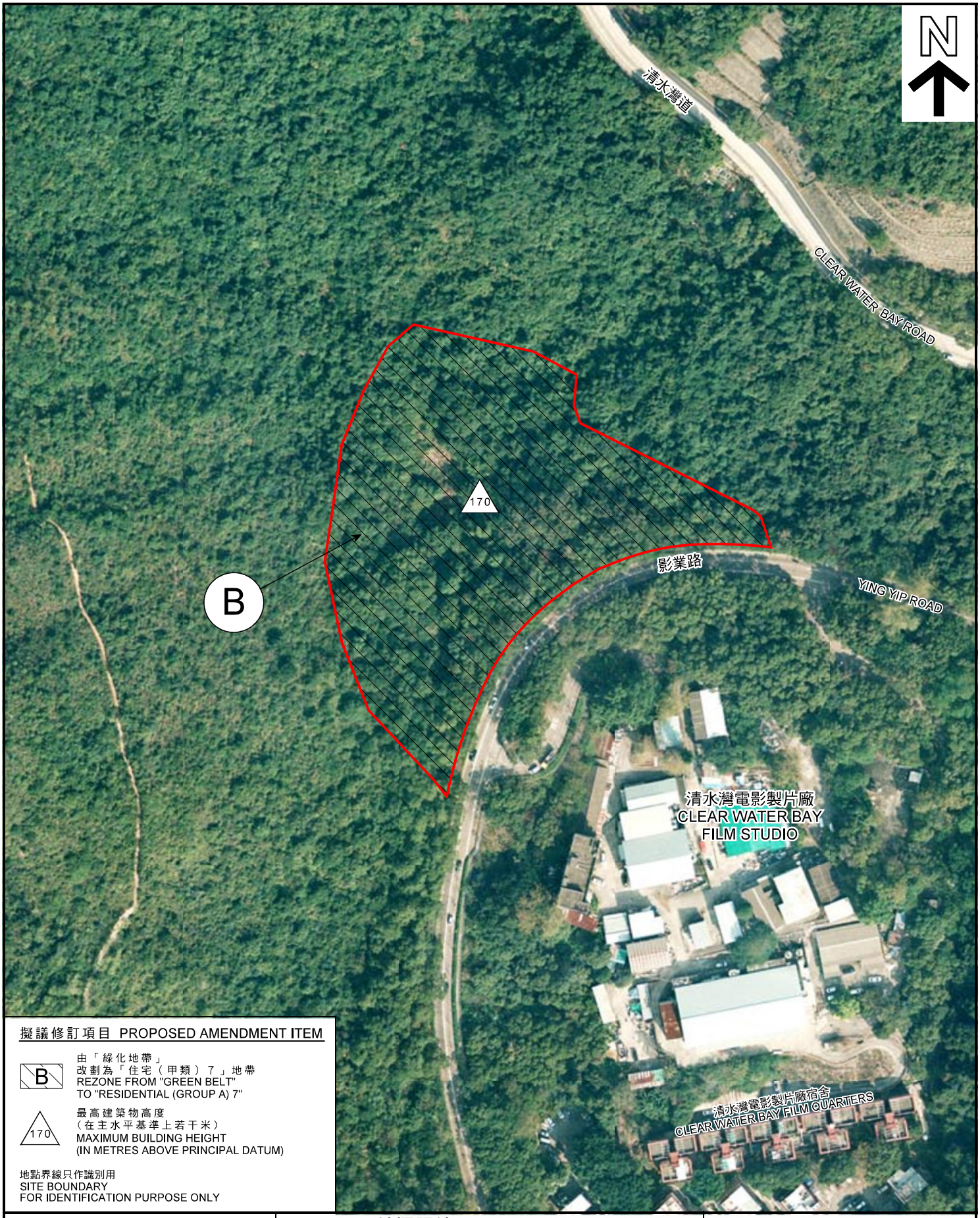
航攝照片 AERIAL PHOTO

地點1（SKI-1）：將軍澳村以北
已核准的將軍澳分區計劃大綱圖
編號 S/TKO/24 的擬議修訂
SITE 1 (SKI-1) : NORTH OF TSEUNG KWAN O VILLAGE
PROPOSED AMENDMENTS TO
THE APPROVED TSEUNG KWAN O
OUTLINE ZONING PLAN No. S/TKO/24

規劃署
PLANNING
DEPARTMENT

參考編號
REFERENCE No.
M/TKO/17/58

圖 PLAN
4a



擬議修訂項目 PROPOSED AMENDMENT ITEM

B
由「綠化地帶」
改劃為「住宅（甲類）7」地帶
REZONE FROM "GREEN BELT"
TO "RESIDENTIAL (GROUP A) 7"

170
最高建築物高度
（在主水平基準上若干米）
MAXIMUM BUILDING HEIGHT
(IN METRES ABOVE PRINCIPAL DATUM)

地點界線只作識別用
SITE BOUNDARY
FOR IDENTIFICATION PURPOSE ONLY

本摘要圖於2017年6月1日擬備，
所根據的資料為地政總署
於2016年1月8日拍得的
航攝照片編號CS62913
EXTRACT PLAN PREPARED ON 1.6.2017
BASED ON AERIAL PHOTO No.
CS62913 TAKEN ON 8.1.2016
BY LANDS DEPARTMENT

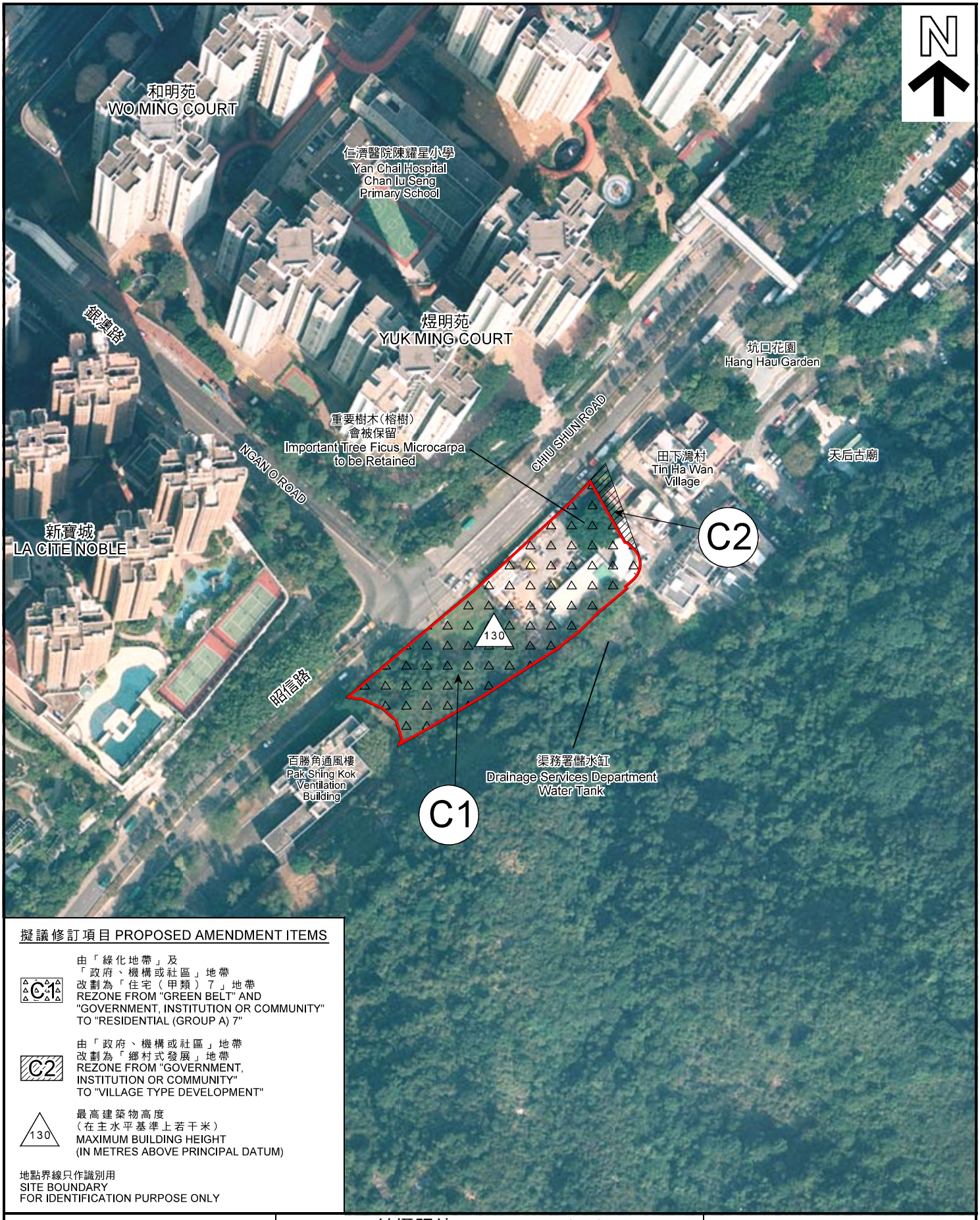
航攝照片 AERIAL PHOTO

地點2（SKI-2）：影業路以西北
已核准的將軍澳分區計劃大綱圖
編號 S/TKO/24 的擬議修訂
SITE 2 (SKI-2) : NORTHWEST OF YING YIP ROAD
PROPOSED AMENDMENTS TO
THE APPROVED TSEUNG KWAN O
OUTLINE ZONING PLAN No. S/TKO/24

規劃署
PLANNING
DEPARTMENT

參考編號
REFERENCE No.
M/TKO/17/58

圖 PLAN
4b



擬議修訂項目 PROPOSED AMENDMENT ITEMS

C1
由「綠化地帶」及
「政府、機構或社區」地帶
改劃為「住宅(甲類)7」地帶
REZONE FROM "GREEN BELT" AND
"GOVERNMENT, INSTITUTION OR COMMUNITY"
TO "RESIDENTIAL (GROUP A) 7"

C2
由「政府、機構或社區」地帶
改劃為「鄉村式發展」地帶
REZONE FROM "GOVERNMENT,
INSTITUTION OR COMMUNITY"
TO "VILLAGE TYPE DEVELOPMENT"

130
最高建築物高度
(在主水平基準上若干米)
MAXIMUM BUILDING HEIGHT
(IN METRES ABOVE PRINCIPAL DATUM)

地點界線只作識別用
SITE BOUNDARY
FOR IDENTIFICATION PURPOSE ONLY

本摘要圖於2017年6月1日擬備，
所根據的資料為地政總署
於2016年1月8日拍得的
航攝照片編號CS63130
EXTRACT PLAN PREPARED ON 1.6.2017
BASED ON AERIAL PHOTO No.
CS63130 TAKEN ON 8.1.2016
BY LANDS DEPARTMENT

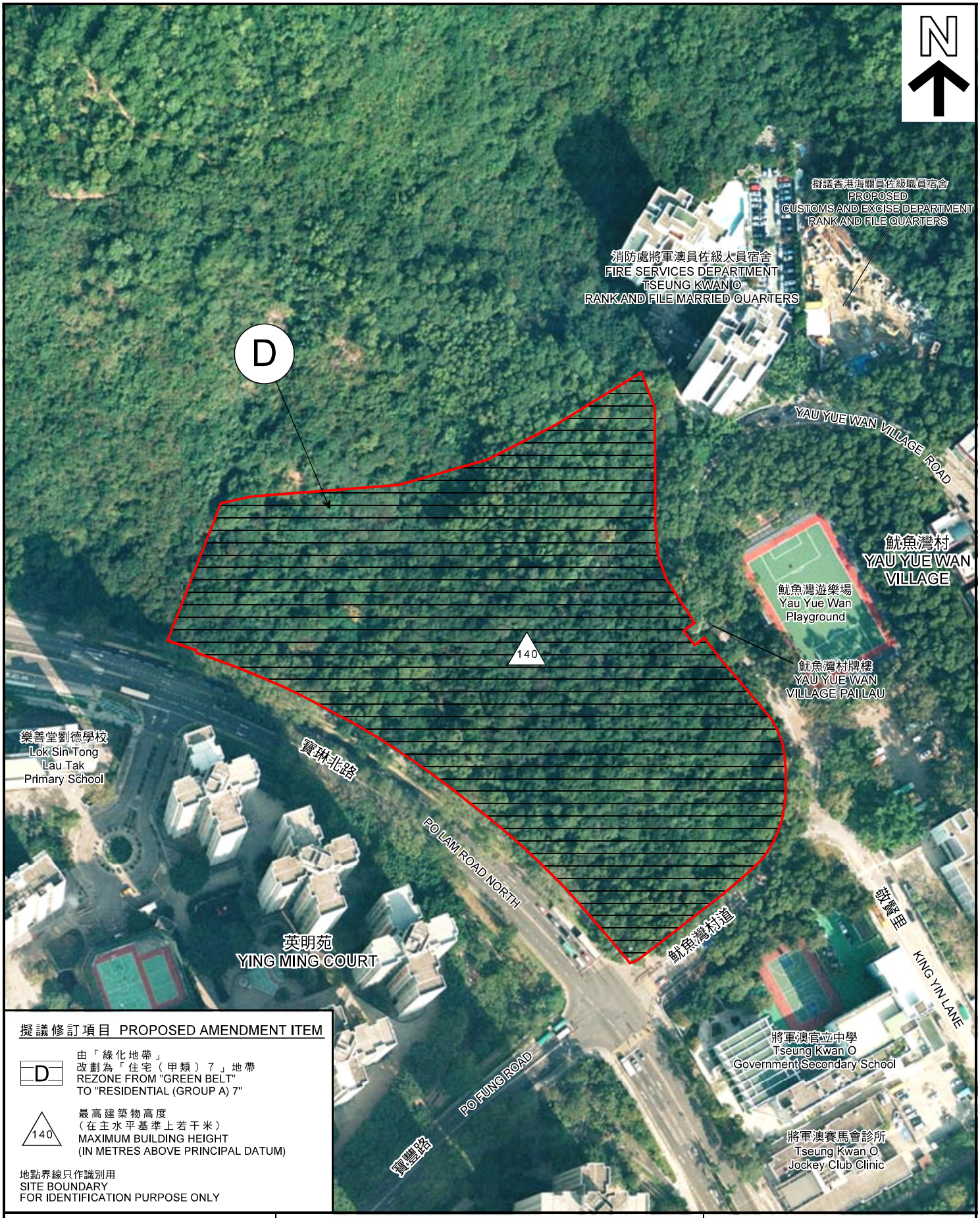
航攝照片 AERIAL PHOTO

地點3(SKI-6)：昭信路以南
已核准的將軍澳分區計劃大綱圖
編號 S/TKO/24 的擬議修訂
SITE 3 (SKI-6) : SOUTH OF CHIU SHUN ROAD
PROPOSED AMENDMENTS TO
THE APPROVED TSEUNG KWAN O
OUTLINE ZONING PLAN No. S/TKO/24

規劃署
PLANNING
DEPARTMENT

參考編號
REFERENCE No.
M/TKO/17/58

圖 PLAN
4c



擬議修訂項目 PROPOSED AMENDMENT ITEM

D — 由「綠化地帶」改劃為「住宅（甲類）7」地帶
REZONE FROM "GREEN BELT" TO "RESIDENTIAL (GROUP A) 7"

140 — 最高建築物高度（在主水平基準上若干米）
MAXIMUM BUILDING HEIGHT (IN METRES ABOVE PRINCIPAL DATUM)

地點界線只作識別用
SITE BOUNDARY
FOR IDENTIFICATION PURPOSE ONLY

本摘要圖於2017年6月1日擬備，所根據的資料為地政總署於2016年1月8日拍得的航攝照片編號CS62911
EXTRACT PLAN PREPARED ON 1.6.2017 BASED ON AERIAL PHOTO No. CS62911 TAKEN ON 8.1.2016 BY LANDS DEPARTMENT

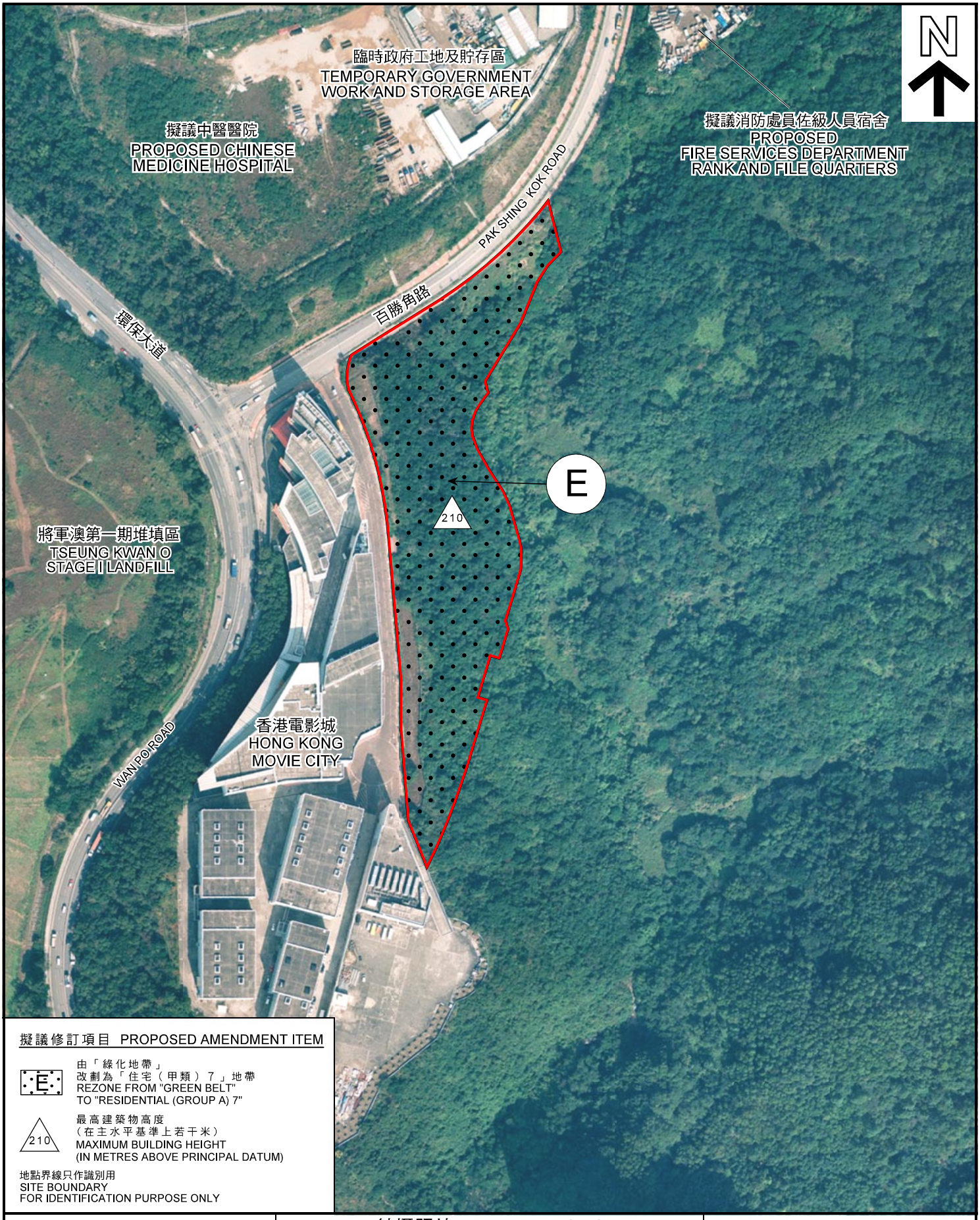
航攝照片 AERIAL PHOTO

地點4 (SKI-11)：魚灣村以西
已核准的將軍澳分區計劃大綱圖
編號 S/TKO/24 的擬議修訂
SITE 4 (SKI-11) : WEST OF YAU YUE WAN VILLAGE
PROPOSED AMENDMENTS TO
THE APPROVED TSEUNG KWAN O
OUTLINE ZONING PLAN No. S/TKO/24

規劃署
PLANNING DEPARTMENT

參考編號
REFERENCE No.
M/TKO/17/58

圖 PLAN 4d



擬議修訂項目 PROPOSED AMENDMENT ITEM

E
由「綠化地帶」
改劃為「住宅（甲類）7」地帶
REZONE FROM "GREEN BELT"
TO "RESIDENTIAL (GROUP A) 7"

210
最高建築物高度
（在主水平基準上若干米）
MAXIMUM BUILDING HEIGHT
(IN METRES ABOVE PRINCIPAL DATUM)

地點界線只作識別用
SITE BOUNDARY
FOR IDENTIFICATION PURPOSE ONLY

本摘要圖於2017年6月1日擬備，
所根據的資料為地政總署
於2016年1月8日拍得的
航攝照片編號CS63291
EXTRACT PLAN PREPARED ON 1.6.2017
BASED ON AERIAL PHOTO No.
CS63291 TAKEN ON 8.1.2016
BY LANDS DEPARTMENT

航攝照片 AERIAL PHOTO

地點5 (SKI-12)：香港電影城以東
已核准的將軍澳分區計劃大綱圖
編號 S/TKO/24 的擬議修訂
SITE 5 (SKI-12) :EAST OF HONG KONG MOVIE CITY
PROPOSED AMENDMENTS TO
THE APPROVED TSEUNG KWAN O
OUTLINE ZONING PLAN No. S/TKO/24

規劃署
PLANNING
DEPARTMENT

參考編號
REFERENCE No.
M/TKO/17/58

圖 PLAN
4e

1-1



1-2



地點界線只作識別用
SITE BOUNDARY FOR IDENTIFICATION PURPOSE ONLY

本摘要圖於2017年6月1日擬備，
所根據的資料為規劃署資訊系統及
土地供應組於2017年5月29日
擬備的無人駕駛航拍照片
EXTRACT PLAN PREPARED ON 1.6.2017
BASED ON UNMANNED AERIAL VEHICLE
(UAV) PHOTOS TAKEN ON 29.5.2017
BY INFORMATION SYSTEMS AND LAND
SUPPLY SECTION, PLANNING DEPARTMENT

實地照片 SITE PHOTO

地點 1 (SKI-1) ： 將軍澳村以北
已核准的將軍澳分區計劃大綱圖
編號 S/TKO/24 的擬議修訂
SITE 1 (SKI-1) : NORTH OF TSEUNG KWAN O VILLAGE
PROPOSED AMENDMENTS TO
THE APPROVED TSEUNG KWAN O
OUTLINE ZONING PLAN No. S/TKO/24

規劃署
PLANNING
DEPARTMENT

參考編號
REFERENCE No.
M/TKO/17/58

圖 PLAN
5a

2-1



2-2



地點界線只作識別用
SITE BOUNDARY FOR IDENTIFICATION PURPOSE ONLY

本摘要圖於2017年6月1日擬備，
所根據的資料為規劃署資訊系統及
土地供應組於2017年5月29日
擬備的無人駕駛航拍照片
EXTRACT PLAN PREPARED ON 1.6.2017
BASED ON UNMANNED AERIAL VEHICLE
(UAV) PHOTOS TAKEN ON 29.5.2017
BY INFORMATION SYSTEMS AND LAND
SUPPLY SECTION, PLANNING DEPARTMENT

實地照片 SITE PHOTO

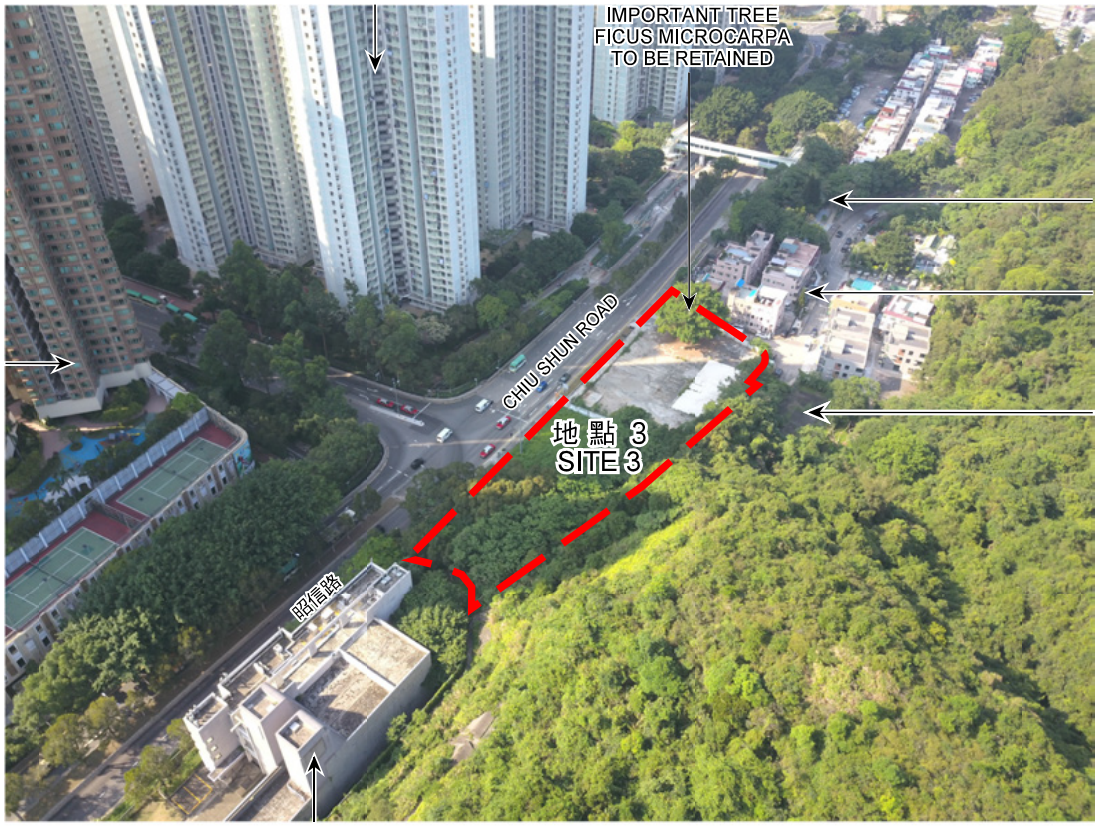
地點2 (SKI-2) ： 影業路以西北
已核准的將軍澳分區計劃大綱圖
編號 S/TKO/24 的擬議修訂
SITE 2 (SKI-2) : NORTHWEST OF YING YIP ROAD
PROPOSED AMENDMENTS TO
THE APPROVED TSEUNG KWAN O
OUTLINE ZONING PLAN No. S/TKO/24

規劃署
PLANNING
DEPARTMENT

參考編號
REFERENCE No.
M/TKO/17/58

圖 PLAN
5b

3-1



3-2



地點界線只作識別用
SITE BOUNDARY FOR IDENTIFICATION PURPOSE ONLY

本摘要圖於2017年6月1日擬備，
所根據的資料為規劃署資訊系統及
土地供應組於2017年5月29日
擬備的無人駕駛航拍照片
EXTRACT PLAN PREPARED ON 1.6.2017
BASED ON UNMANNED AERIAL VEHICLE
(UAV) PHOTOS TAKEN ON 29.5.2017
BY INFORMATION SYSTEMS AND LAND
SUPPLY SECTION, PLANNING DEPARTMENT

實地照片 SITE PHOTO

地點 3 (SKI-6) ： 昭信路以南
已核准的將軍澳分區計劃大綱圖
編號 S/TKO/24 的擬議修訂
SITE 3 (SKI-6) : SOUTH OF CHIU SHUN ROAD
PROPOSED AMENDMENTS TO
THE APPROVED TSEUNG KWAN O
OUTLINE ZONING PLAN No. S/TKO/24

規劃署
PLANNING
DEPARTMENT

參考編號
REFERENCE No.
M/TKO/17/58

圖 PLAN
5c

4-1



4-2



地點界線只作識別用
SITE BOUNDARY FOR IDENTIFICATION PURPOSE ONLY

本摘要圖於2017年6月1日擬備，
所根據的資料為規劃署資訊系統及
土地供應組於2017年5月29日
擬備的無人駕駛航拍照片
EXTRACT PLAN PREPARED ON 1.6.2017
BASED ON UNMANNED AERIAL VEHICLE
(UAV) PHOTOS TAKEN ON 29.5.2017
BY INFORMATION SYSTEMS AND LAND
SUPPLY SECTION, PLANNING DEPARTMENT

實地照片 SITE PHOTO

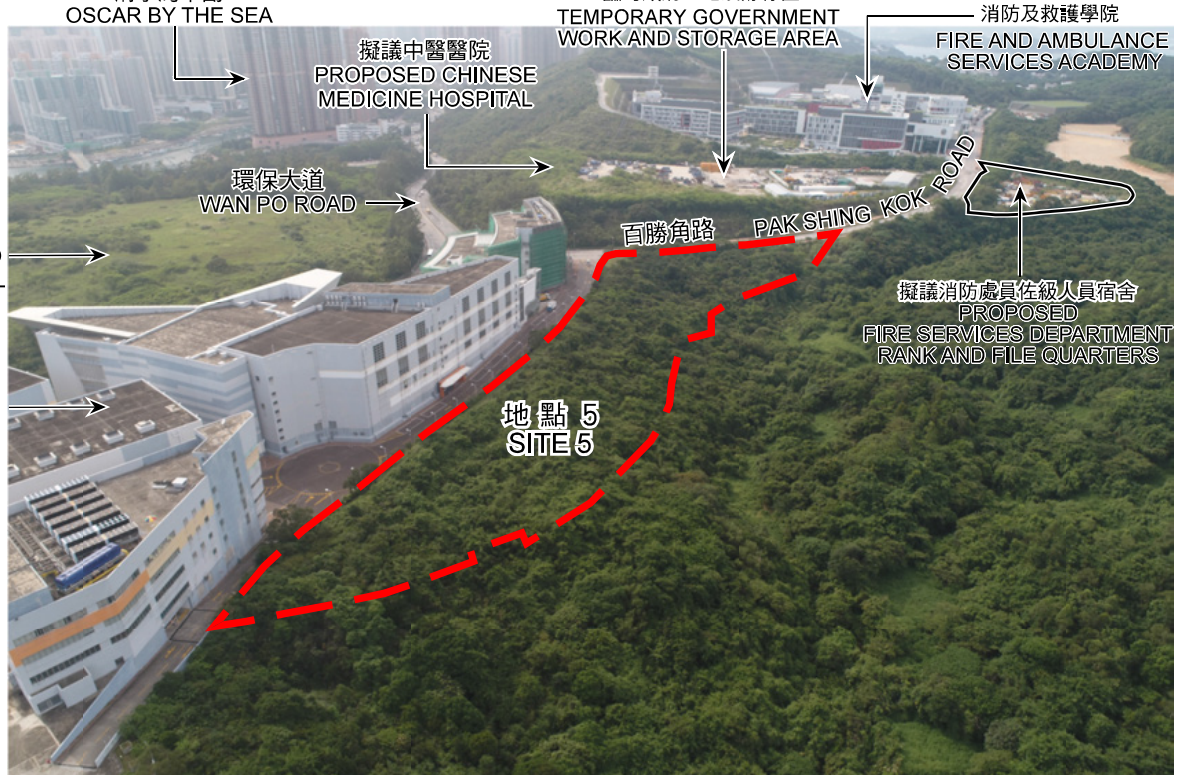
地點 4 (SKI-11) ： 鰂魚灣村以西
已核准的將軍澳分區計劃大綱圖
編號 S/TKO/24 的擬議修訂
SITE 4 (SKI-11) : WEST OF YAU YUE WAN VILLAGE
PROPOSED AMENDMENTS TO
THE APPROVED TSEUNG KWAN O
OUTLINE ZONING PLAN No. S/TKO/24

規劃署
PLANNING
DEPARTMENT

參考編號
REFERENCE No.
M/TKO/17/58

圖 PLAN
5d

5-1



5-2



地點界線只作識別用
SITE BOUNDARY FOR IDENTIFICATION PURPOSE ONLY

本摘要圖於2017年6月1日擬備，
所根據的資料為規劃署資訊系統及
土地供應組於2017年5月29日
擬備的無人駕駛航拍照片
EXTRACT PLAN PREPARED ON 1.6.2017
BASED ON UNMANNED AERIAL VEHICLE
(UAV) PHOTOS TAKEN ON 29.5.2017
BY INFORMATION SYSTEMS AND LAND
SUPPLY SECTION, PLANNING DEPARTMENT

實地照片 SITE PHOTO

地點5 (SKI-12) ： 香港電影城以東
已核准的將軍澳分區計劃大綱圖
編號 S/TKO/24 的擬議修訂
SITE 5 (SKI-12) : EAST OF HONG KONG MOVIE CITY
PROPOSED AMENDMENTS TO
THE APPROVED TSEUNG KWAN O
OUTLINE ZONING PLAN No. S/TKO/24

規劃署
PLANNING
DEPARTMENT

參考編號
REFERENCE No.
M/TKO/17/58

圖 PLAN
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