

TOWN PLANNING BOARD

**TPB PAPER NO. 9808
FOR CONSIDERATION BY
THE TOWN PLANNING BOARD ON 19.12.2014**

**DRAFT CHEK KENG OUTLINE ZONING PLAN NO. S/NE-CK/B
PRELIMINARY CONSIDERATION OF A NEW PLAN**

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1. Purpose

The purpose of this paper is to seek Members' agreement:

- (a) that the draft Chek Keng Outline Zoning Plan (OZP) No. S/NE-CK/B (the Plan) (**Appendix I**) together with its Notes (**Appendix II**) are suitable for consultation with the Tai Po District Council (TPDC) and Sai Kung North Rural Committee (SKNRC); and
- (b) that the Explanatory Statement (ES) (**Appendix III**) is an expression of the planning intentions and objectives of the Town Planning Board (the Board) for the various land use zonings of the draft OZP and is suitable for consultation with the TPDC and SKNRC together with the draft OZP.

2. Background

- 2.1 On 4.5.2012, the draft Chek Keng Development Permission Area (DPA) Plan No. DPA/NE-CK/1 was exhibited for public inspection under section 5 of the Town Planning Ordinance (the Ordinance). During the two-month exhibition period, nine representations were received. On 27.7.2012, the representations were published for three weeks for public comment and no comment was received. After giving consideration to the representations on 18.1.2013, the Board decided not to propose any amendment to the draft DPA plan to meet the representations.
- 2.2 On 30.4.2013, the Chief Executive in Council (CE in C), under section 9(1)(a) of the Ordinance, approved the draft Chek Keng DPA plan, which was subsequently renumbered as DPA/NE-CK/2. On 10.5.2013, the approved Chek Keng DPA Plan No. DPA/NE-CK/2 was exhibited for public inspection under section 9(5) of the Ordinance.
- 2.3 Pursuant to section 20(5) of the Ordinance, the Chek Keng DPA Plan is effective for a period of three years until 4.5.2015. An OZP has to be prepared to replace the DPA Plan in order to maintain statutory planning control over the Chek Keng area upon expiry of the DPA Plan.
- 2.4 On 16.10.2014, under the power delegated by the Chief Executive, the Secretary for Development directed the Board, under section 3(1)(a) of the Ordinance, to prepare an OZP to cover the Chek Keng area.

3. Strategic Planning Context

- 3.1 The Planning Scheme Area (the Area), covering a total area of about 34.74 ha, is a Country Park Enclave surrounded by the Sai Kung East Country Park except where it fronts onto Chek Keng Hau in the north, one of the sea bays along the northern coast of the Country Park (**Plans 1 to 3**).
- 3.2 With reference to the ‘Landscape Value Mapping of Hong Kong (2005)’, the Area is characterized as settled valley landscape of high landscape and scenic value complementing the overall naturalness and landscape beauty of the surrounding Sai Kung East Country Park. The second section of MacLehose Trail, a popular hiking trail of Hong Kong, passes through the Area. Most of the natural landscape is largely undisturbed, and the important landscape resources include woodland on steep rolling slopes, streams, low-lying abandoned agricultural land, mudflats, sandy/rocky shore with cliff, estuarine areas with mangroves/backshore vegetation, and some feature trees with high amenity value in the village and near the Holy Family Chapel (**Figures 5a and 5b of Appendix IV**).
- 3.3 The planning framework for the Area is to protect the natural and scenic character of the Area from uncontrolled development and avoid disturbances to areas with high ecological and landscape value. Details of the land use considerations are contained in the Planning Report on Chek Keng at **Appendix IV**. Some major issues in relation to the proposed zonings are stated below.

4. Issues Arising from Consideration of the DPA Plan

During the exhibition period of the draft DPA Plan, a total of nine representations were received. The major land use proposals raised by the representers are recapitulated below:

- (a) The green concern groups¹ proposed that conservation zonings such as “Conservation Area” (“CA”) and “Coastal Protection Area” (“CPA”) should be designated to reflect the ecological value of the Area and protect the natural habitats including woodland, natural streams, natural coastline and coastal natural environment, etc. Some of them suggested that the extent of the “Village Type Development” (“V”) zone should be limited to avoid adverse impacts, in particular water pollution, on the natural environment and to incorporate the Area into the Country Park; and
- (b) The Indigenous Inhabitant Representative (IIR) of the Chek Keng Village proposed a development plan for a variety of land uses which included the expansion of the “V” zone and indicated that a comprehensive development proposal would be submitted for the Board’s consideration, and SKNRC proposed that the “V” zone should tally with the village ‘environs’ (‘VE’).

¹ Green concern groups include Designing Hong Kong Limited, Kadoorie Farm & Botanic Garden Corporation, The Hong Kong Bird Watching Society and World Wide Fund for Nature Hong Kong.

5. Town Planning Board's Decisions and Instructions

On 18.1.2013, the Board decided not to propose any amendment to the draft DPA Plan to meet the representations. It was agreed that detailed land use zonings would be worked out during the OZP preparation stage taking account of the results of relevant assessments on various aspects including Small House demand and developments, conservation value, the environmental and infrastructural constraints, and landscape character, etc in consultation with relevant stakeholders.

6. Object of the Plan

- 6.1 The object of the Plan is to indicate the broad land use zonings for the Area so that development and redevelopment within the Area can be put under statutory planning control. It also provides the planning framework for preparing more detailed non-statutory plans which form the basis for public works planning and site reservation for various uses.
- 6.2 The Plan is to illustrate the broad principles of development and to provide guidance for more detailed planning. It is a small-scale plan, and the boundaries between the land use zones may be subject to minor adjustments as detailed planning and development proceed.

7. The Planning Scheme Area (Plans 1 to 3) (Figures 5 and 6 of Appendix IV)

- 7.1 The Area, covering a total area of about 34.74 ha, is surrounded by the Sai Kung East Country Park except where it fronts onto Chek Keng Hau in the north, one of the sea bays along the northern coast of the Country Park.
- 7.2 MacLehose Trail traverses the Area from east to west, largely dividing the lower seaside area mainly with natural coastline and features to its north from the higher landside area with a village cluster and vegetated slopes/valleys to its south.
- 7.3 Surrounded by the Sai Kung East Country Park on three sides and comprising mainly woodlands, shrublands, grasslands, streams, sandy/rocky shore with cliff, backshore vegetation and mangroves, the Area forms part of the wider natural environment of the Country Park. The woodland is ecologically-linked to the natural habitats in the Country Park and supports protected plant species. Uncommon plant species have also been found in the Area. The intertidal mudflat supporting various species of mangroves and a high diversity of mangrove fauna can be found straddling the edge of the Area and the sea. Backshore vegetation largely extends from the intertidal mudflat southward to the MacLehose Trail and westward along the coast, forming a transition between the mangroves and the woodland.
- 7.4 Fronting onto the sea bay with the village situated in its central part and two natural streams flowing through the valleys, the Area forms a continuous scenic belt at the Chek Keng Hau along the MacLehose Trail. In general, the Area is natural and rural in character and has high landscape and scenic value.

- 7.5 The Chek Keng Village is the only recognized village within the Area. According to the 2011 Census, the total population of the Area was about 30 persons. The village houses are mostly abandoned with many in dilapidated condition or become ruins. The Holy Family Chapel (聖家小堂), built in 1874 and now vacant, is a Grade 2 historic building worthy of preservation. There is a permitted burial ground on the hillslopes along the northeastern edge of the Area.

8. **Development Proposals Received in the Course of Preparation of the Plan**

- 8.1 As at December 2014, since the gazettal of the draft DPA Plan on 4.5.2012, no planning application within the Area has been received by the Board.
- 8.2 On 7.10.2014, Kadoorie Farm & Botanic Garden Corporation (KFBG) made a submission to Planning Department (PlanD) which includes a report on “Ecological and Conservation Importance of Six Sai Kung Country Park Enclaves” and land use proposal for the Area (**Appendix V**). According to KFBG’s submission, the woodlands, watercourses and riparian zones, mangroves and backshore vegetation, and riparian grasslands in the Chek Keng study area² are of high conservation importance and should be covered by an appropriate land use zoning such as the “CA” zone under the planning system. No development incompatible with surrounding areas or the natural heritage of these areas should be authorized. From the ecological and nature conservation perspectives, due to the strong ecological and functional linkages, the Chek Keng Country Park Enclave is very much part of the Country Park system, and thus the Government should consider incorporating it, or areas of high conservation importance therein, into the Country Park.
- 8.3 A meeting with the IIR of Chek Keng Village and his consultants was conducted on 5.11.2014 to briefly exchange views on their preliminary land use proposals. On 13.11.2014, the IIR of Chek Keng Village submitted a preliminary land use proposal to PlanD (**Appendix VI**). He considers that the area of the “V” zone in the DPA Plan is insufficient to meet the Small House demand and proposes to expand the “V” zone to the east and west along the two natural streams. Other preliminary land use proposals mainly include: (i) three clusters of village hotels in the proposed “V” zone; (ii) the proposed “G/IC” zone on both sides of the eastern stream for a tourism facility for the seniors and disabled and a university specialized in environmental protection and organic farming; (iii) the proposed “Agriculture” zone along the eastern side of the eastern stream; (iv) the proposed “Recreation” zone in the western part of the Area for holiday resorts; (v) the proposed “CA” zone for the Holy Family Chapel and its immediate environs; (vi) two strips of 10m-wide “CPA” zone near the two small piers along the coast; (vii) 10m-wide buffer zone on both sides of the two natural streams; and (viii) a central sewage treatment system for the Area. The IIR indicates that he would submit a detailed report including development proposals as well as tree and ecological appraisals in due course.
- 8.4 Planning assessment of the proposals is in **Appendix VII**. The views conveyed in these proposals have been taken into account in the preparation of the draft

² This also covers the area 50m from the boundary of the Country Park Enclave.

OZP. Details are in paragraph 9 below.

9. Land Use Planning Considerations (Plan 4)

Conservation of Natural Environment (Figures 5a to 5f of Appendix IV)

- 9.1 Surrounded by the Sai Kung East Country Park on three sides and comprising mainly woodlands, shrublands, grasslands, streams, sandy/rocky shore with cliff, backshore vegetation and mangroves, the Area forms part of the wider natural environment of the Country Park. MacLehose Trail traverses the Area from east to west, largely dividing the lower seaside area mainly with natural coastline and features to its north from the higher landside area with a village cluster and vegetated slopes/valleys to its south.
- 9.2 To the north (sea side) of MacLehose Trail is mainly the lower coastal area comprising sandy/rocky shore, stream estuaries and areas covered with backshore vegetation, and further to the north are mangroves in the intertidal mudflat straddling the edge of the Area and the sea. The intertidal mudflat supports seven species of mangroves including the uncommon *Heritiera littoralis* (銀葉樹) and a high diversity of mangrove fauna. Backshore vegetation largely extends from the intertidal mudflat southward to the MacLehose Trail and westward along the coast, forming a transition between the mangroves and the woodland. Dominant flora species include the *Paliurus ramosissimus* (馬甲子), *Hibiscus tiliaceus* (黃槿) and *Cerbera manghas* (海杧果). The backshore vegetation areas are ecologically linked with mangroves and provide habitats for Sesarmino Crabs³. There is a protruding vegetated knoll in the eastern section of the coastal front which is flanked by a cliff along the southern side of MacLehose Trail.
- 9.3 It is proposed to zone the above areas as “Coastal Protection Area” (“CPA”) in order to conserve, protect and retain the natural coastlines and the sensitive coastal natural environment. It can also provide a buffer between the adjoining village area and the marine environment. Agriculture, Fisheries and Conservation Department (AFCD) considers the “CPA” designation and delineation are appropriate.
- 9.4 Except for the village cluster and some Government, Institution or Community (GIC) facilities, the Area to the south of MacLehose Trail mainly comprises woodlands, shrublands, grasslands and streams. The abandoned agricultural land on both sides of the two natural streams are currently mainly covered by woodland in the upper sections, whereas patches of shrubland and grassland are found in the lower sections. The woodland is ecologically-linked to the natural habitats in the Country Park and supports protected plant species, such as *Aquilaria sinensis* (土沉香) and *Cibotium barometz* (金毛狗). Uncommon plant species such as *Zanthoxylum ailanthoides* (椿葉花椒) and *Zoysia sinica* (中華結縷草) have also been found in the Area. The two natural streams in the eastern and western parts of the Area flow through the valleys from south to north into the sea. There is neither *fung shui* woodland nor Ecologically

³ The diversity of Sesarmino Crabs is indicative to the “intactness” of the mangrove ecosystem.

Important Stream (EIS) in the Area, and the terrestrial habitats consist largely of common native plant species. Having consulted AFCD, it is proposed to zone the above areas as “Green Belt” (“GB”) in order to provide a buffer between the village type developments and the Country Park and to conserve the natural and rural character of the Area.

Government, Institution or Community Facilities (Figures 6a, 6c and 6d of Appendix IV)

- 9.5 Major GIC facilities in the Area to meet the community needs include a public toilet and a refuse collection point along MacLehose Trail in the eastern part of the Area. The Holy Family Chapel (聖家小堂) is located at the southern fringe of Chek Keng Village. It was built in 1874 and is a Grade 2 historic building worthy of preservation. In late 1980s, the Chapel was turned into a youth camp and is now vacant. To reflect these GIC facilities, it is proposed to zone these facilities as “Government, Institution or Community” (“G/IC”).
- 9.6 Prior consultation with the Antiquities and Monuments Office of the Leisure and Cultural Services Department should be made if any development, redevelopment or rezoning proposals might affect the above graded historic building and its immediate environs.

Land for Village Development (Figures 6 and 10 of Appendix IV)

- 9.7 There have been two divergent views over the designation of “V” zone i.e. to limit the “V” zone as proposed by the green concern groups to avoid adverse impacts on the natural environment versus to expand the “V” zone as proposed by the IIR of Chek Keng Village and SKNRC to meet the Small House demand.
- 9.8 According to the District Lands Officer/Tai Po, Lands Department (DLO/TP, LandsD), there are 20 outstanding Small House applications in the Area and the 10-year Small House demand forecast provided by the IIR of the Chek Keng Village is 254. Based on PlanD’s preliminary estimate, land required for meeting the Small House demand of 274 is about 6.85 ha.
- 9.9 With reference to the Small House demand and ‘VE’ for the recognized village of Chek Keng, PlanD has analyzed the site conditions of the area within ‘VE’, taking into account of the existing village settlement, previously approved Small House application⁴, environmental conditions, natural terrain and topography. The whole ‘VE’ of Chek Keng Village has an area of 8.2 ha and its majority with an area of 7.49 ha is included in the boundary of the draft OZP. The existing village cluster is situated in the central part of the ‘VE’, with a few houses scattered along the coast. Most of the houses are concentrated on the southern side of the MacLehose Trail on platforms formed on hill slope. The village houses are mostly abandoned with many in dilapidated condition or become ruins. Some of the land in the village has been overgrown with dense vegetation, and the remaining area of the ‘VE’ mainly comprises woodlands.

⁴ DLO/TP has advised that there was a Small House application approved in 2008, and since then, there has not been any other approval. The draft Chek Keng DPA Plan was first gazetted on 4.5.2012.

- 9.10 Throughout the plan-making process, concerned departments have been closely liaised to ensure that their input and comments are duly taken into account in the delineation of the “V” zone for the existing village cluster and potential areas for village expansion. AFCD and CTP/UD&L, PlanD indicate that the areas to the southeast of the village cluster and to the southwest of the Holy Family Chapel, which are currently overgrown with dense vegetation, should be excluded from the original “V” zone in the DPA Plan. On the other hand, an area between the village cluster and MacLehose Trail, which is designated as an “Unspecified Use” area in the DPA Plan, is mainly covered with shrubs and younger trees and thus can be considered for development of village houses (**Plan 4**).
- 9.11 Given the natural environment, its ecological and landscape value coupled with its limited accessibility due to lack of vehicular access, an incremental approach for designation of “V” zone for Small House development has been adopted with an aim to confining Small House development at suitable locations so as to avoid undesirable disturbances to the natural environment and overtaking the limited infrastructure in the Area. Discounting the surrounding environmentally sensitive areas, including coastal area, woodland and streams which should be protected, a total of about 2.24 ha of land mainly covering the existing village cluster and its adjoining area has been reserved for Small House development. Within the proposed “V” zone, about 1.04 ha of land is available capable of meeting about 15.2% (41 houses) of the total Small House demand for 274 houses (**Table 1**). Notwithstanding the above, planning application provides another measure for the villagers to apply for Small House development outside “V” zone subject to the Board’s approval.

Table 1: Small House Demand for Chek Keng Village

Small House Demand Figure in 2012		Small House Demand Figure in 2014		‘VE’ Area (ha) (‘VE’ Area in OZP)	“V” Zone on Draft OZP (ha)	Required Land to Meet New Demand (ha)	Available Land to Meet New Demand (ha)	Percentage of the New Demand met by Available Land
Outstanding Demand	10-year Forecast (2012 – 2021)	Outstanding Demand	10-year Forecast (2014 – 2023)					
19	Nil*	20	254**	8.2 (7.49)	2.24	6.85	1.04	15.2%

* According to the TPB Paper No. 9068 on Consideration of the Draft Chek Keng DPA Plan No. DPA/NE-CK/C in April 2012, there were 19 outstanding Small House applications and the 10-year Small House demand forecast had not been available since 2007.

** On 14.11.2014, DLO/TP advised that on 12.11.2014, the IIR submitted a 10-year Small House demand forecast to DLO/TP and the said forecast figure provided by IIR of Chek Keng was 254. DLO/TP further advised that the said forecast figure was not verified in any way by DLO/TP.

- 9.12 There is no existing or planned public sewer for the Area. For Small House development, the design and construction of the septic tank and soakaway systems need to comply with relevant standards and regulations, such as Environmental Protection Department (EPD)'s Practice Note for Professional Persons (ProPECC PN) 5/93 – "*Drainage Plans subject to Comment by the Environmental Protection Department*", for the protection of the water quality of the Area.

Cultural Heritage

- 9.13 The Holy Family Chapel (聖家小堂) is a Grade 2 historic building worthy of preservation. Prior consultation with the Antiquities and Monuments Office of the Leisure and Cultural Services Department should be made if any development, redevelopment or rezoning proposals might affect the above graded historic building and its immediate environs.

Transportation

- 9.14 At present, the Area is not served by any vehicular access and is only accessible by walking trails, including the popular MacLehose Trail which connects it with Pak Tam Road to the west, and Tai Long Wan, High Island Reservoir and Pak Tam Chung to its east and south. Part of the MacLehose Trail is within the Area. There are two small piers near the village and another pier to the northeast of the Area. The Area is also accessible by boats from the nearby Wong Shek, or from the more distant Ma Liu Shui, Tai Po.

10. Planning Intention

- 10.1 The Area forms an integral part of the natural system of the adjoining Sai Kung East Country Park with a wide spectrum of natural habitats including, inter alia, woodlands, shrublands, grasslands, streams, sandy/rocky shore with cliff, backshore vegetation and mangroves which should be preserved and protected. In general, the Area is natural and rural in character and has high landscape and scenic value. The general planning intention of the Area is to protect its high conservation and landscape value which complements the overall naturalness and the landscape beauty of the surrounding Country Park.
- 10.2 Apart from the environmental and ecological considerations, development in the Area is constrained by limited transport and infrastructural provisions. It is also intended to consolidate village development so as to avoid undesirable disturbances to the natural environment and overtaking the limited infrastructure in the Area.

11. Land Use Zonings

- 11.1 "Village Type Development" ("V"): Total Area 2.24 ha

11.1.1 The planning intention of this zone is to designate both the existing

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

- 11.1.2 Chek Keng is the only recognized village in the Area. The boundaries of the “V” zone are drawn up having regard to the village ‘environs’, the number of outstanding Small House applications, Small House demand forecast, local topography and site constraints. Areas of difficult terrain, dense vegetation, stream courses and burial grounds have been avoided as far as possible.
- 11.1.3 As diversion of streams or filling of pond may cause adverse drainage impacts on the adjacent areas and adverse impacts on the natural environment, permission from the Board is required for such activities except public works co-ordinated or implemented by Government, and maintenance, repair or rebuilding works.
- 11.1.4 In accordance with the Environment, Transport and Works Bureau’s Technical Circular (Works) No. 5/2005 “*Protection of Natural Streams/Rivers from Adverse Impacts Arising from Construction Works*”, under the current administrative practice, development proposals/submissions that may affect natural streams/rivers, the approving/processing authorities at various stages of the development should consult and collate comments from the AFCD and relevant authorities and incorporate relevant comments/advice as conditions of approval wherever possible. Accordingly, Lands Department (LandsD), when processing Small House grant and applications in close proximity to existing stream courses, should consult concerned departments including AFCD, EPD and PlanD to ensure that all relevant departments would have adequate opportunity to review and comment on the applications. Such requirement has been stated in the ES.
- 11.1.5 The “V” zone in the Area is located below steep natural terrain with a long history of instability and may be affected by potential natural terrain landslide hazards. For development within the Area, the developer(s) may be required to carry out natural terrain hazard study and to provide suitable hazard mitigation measures, if found necessary, as part of the development.
- 11.1.6 There is no existing or planned public sewer for the Area. For Small House development, the design and construction of the septic tank and soakaway systems need to comply with relevant standards and regulations, such as EPD’s Practice Note for Professional Persons (ProPECC PN) 5/93 – “Drainage Plans subject to Comment by the Environmental Protection Department”, for the protection of the water

quality of the Area.

11.2 “Government, Institution or Community” (“G/IC”): Total Area 0.08 ha

11.2.1 The planning intention of this zone is 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.

11.2.2 The major existing GIC facilities under this zone include a public toilet and a refuse collection point along MacLehose Trail in the eastern part of the Area, as well as the Holy Family Chapel at the southern fringe of Chek Keng Village.

11.3 “Green Belt” (“GB”): Total Area 28.82 ha

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

11.3.2 The “GB” zone comprising mainly woodlands, shrublands, grasslands and streams, can provide a buffer between the village type developments and the Sai Kung East Country Park and conserve the natural and rural character of the Area.

11.3.3 The “GB” zone also comprises the western part of the permitted burial ground on the hillslopes along the northeastern fringe of the Area. It has been in existence for many years, and is considered as existing use intended for the burial of deceased indigenous villagers in the Area. To respect the local ritual and tradition, burial activities within this zone are generally tolerated.

11.4 “Coastal Protection Area” (“CPA”) : Total Area 3.60 ha

11.4.1 This zone is intended to conserve, protect and retain the natural coastlines and the sensitive coastal natural environment, including attractive geological features, physical landform or area of high landscape, scenic or ecological value, with a minimum of built development. It may also cover areas which serve as natural protection areas sheltering nearby developments against the effects of coastal erosion. There is a general presumption against development in this zone. In general, only developments that are needed to support the conservation of the existing natural landscape or scenic quality of the area or are essential infrastructure projects with overriding public interest may be permitted.

11.4.2 This zone mainly covers the coastal area along Chek Keng Hau to the north of MacLehose Trail (with the exception of a few houses and ruins

at the existing village cluster) and the cliff of the vegetated knoll to the south of the trail. It primarily consists of sandy/rocky shore with cliff, backshore vegetation, mangroves and stream estuaries. The intertidal mudflat straddling the edge of the Area and the sea supports seven species of mangroves including the uncommon *Heritiera littoralis* (銀葉樹) and a high diversity of mangrove fauna. Backshore vegetation is ecologically linked with mangroves and provides habitats for Sesarmine Crabs. This zone can also provide a buffer between the adjoining village area and the marine environment.

11.4.3 New residential development is not permitted under this zone. Redevelopment of existing houses may be permitted on application to the Board. Diversion of streams, filling of land/pond or excavation of land may cause adverse drainage impacts on adjacent areas and adverse impacts on the natural environment. In view of the conservation value of the area within this zone, permission from the Board is required for such activities.

11.5 The proposed land use pattern of the Area is shown in **Figure 12 at Appendix IV**. Detailed land use proposals of the Area are set out in paragraph 9 of the ES (**Appendix III**).

11.6 A comparison of land use zonings on the approved Chek Keng DPA Plan No. DPA/NE-CK/2 and the draft OZP No. S/NE-CK/B is shown in the table below:

Land Use Zoning	Area on approved DPA Plan	Area on the Draft OZP
“V”	2.24 ha (6.45%)	2.24 ha (6.45%)
“Unspecified”	32.5 ha (93.55%)	-
“G/IC”	-	0.08 ha (0.23%)
“GB”	-	28.82 ha (82.96%)
“CPA”	-	3.60 ha (10.36%)
Total	34.74 ha	34.74 ha

12. Notes of the Plan

12.1 Attached to the Plan is a set of Notes which shows the types of uses or developments which are always permitted within the Area and other uses for which planning permission from the Board should be sought. The provision for application for planning permission under section 16 of the Ordinance allows flexibility in land use planning and control of development to meet the changing needs. To provide flexibility for development with design adapted to the characteristics of particular sites, minor relaxation of the specific development restriction(s) stated in the Notes for particular zones may be considered by the Board through the planning permission system. Each proposal will be considered on its individual planning merits.

12.2 The draft Notes are formulated on the basis of the latest set of Master Schedule of Notes (MSN) endorsed by the Board.

13. Consultation

- 13.1 Prior to the preparation of the draft OZP, the major stakeholders have been approached for their views/proposals. Views from KFBG and the IIR of Chek Keng Village have been incorporated where appropriate. The draft OZP together with its Notes and Explanatory Statement as well as the Planning Report have been circulated to the relevant Government bureaux and departments for comments. Comments received have been incorporated into the draft OZP, its Notes and ES as well as the Planning Report as appropriate.
- 13.2 Subject to the agreement of the Board, the draft OZP No. S/NE-CK/B will be submitted to the TPDC and SKNRC for consultation. Comments from the TPDC and SKNRC will be submitted to the Board for consideration prior to the publication of the draft OZP under section 5 of the Ordinance.

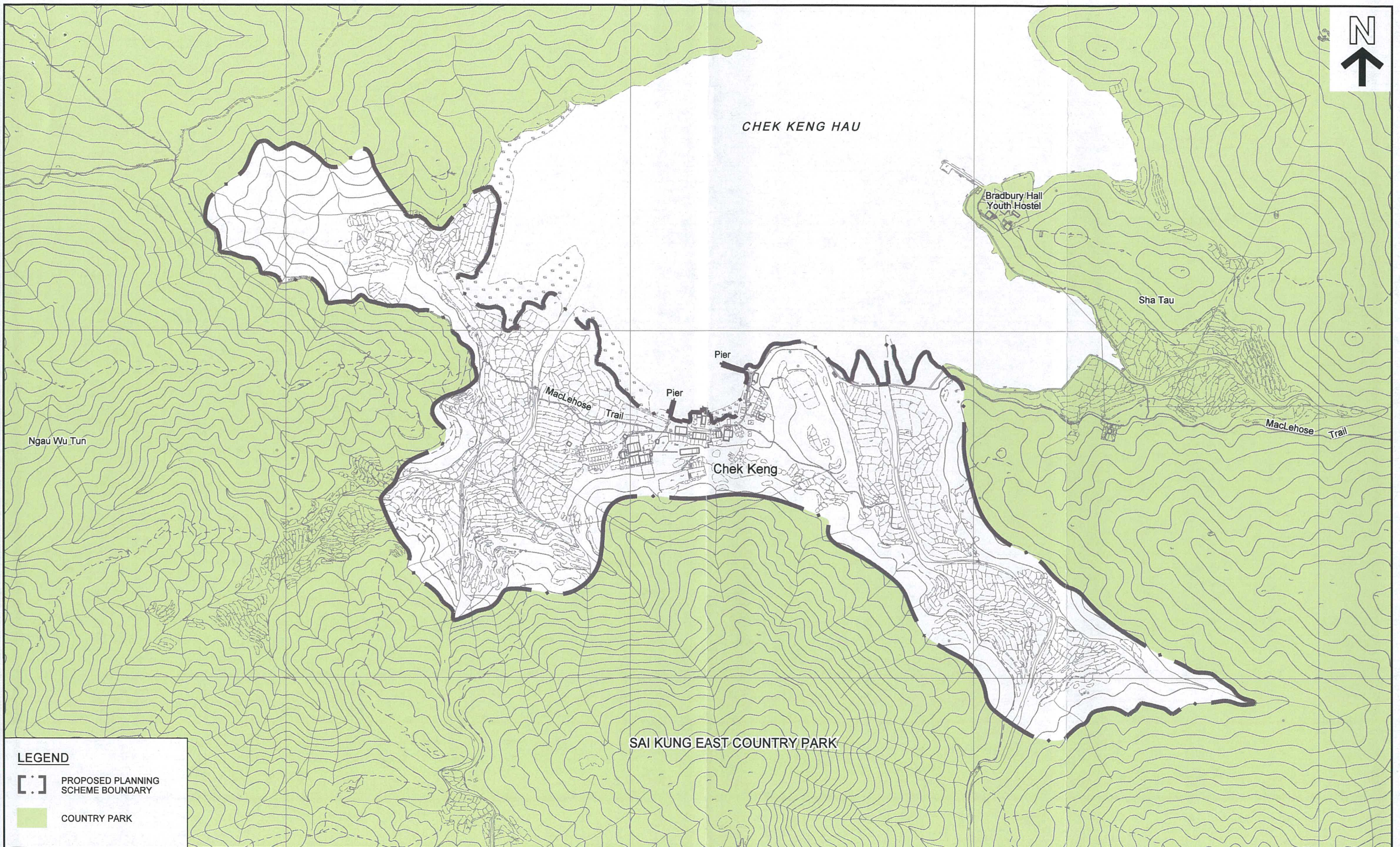
14. Decision Sought

Members are invited to:

- (a) agree that the draft Chek Keng OZP No. S/NE-CK/B (**Appendix I**) together with its Notes (**Appendix II**) are suitable for consultation with the TPDC and SKNRC;
- (b) agree that the ES (**Appendix III**) is suitable to serve as an expression of the planning intentions and objectives of the Board for various land use zonings of the draft Chek Keng OZP No. S/NE-CK/B and the ES should be issued under the name of the Board; and
- (c) agree that the ES (**Appendix III**) is suitable for consultation with the TPDC and SKNRC together with the draft OZP.

15. Attachments

Plan 1	Planning Scheme Area of the Draft Chek Keng OZP
Plan 2	Aerial Photo of Chek Keng
Plan 3	Village Environs and Existing Physical Features of Chek Keng
Plan 4	Development Constraints and Proposed Land Uses
Appendix I	Draft Chek Keng OZP No. S/NE-CK/B
Appendix II	Notes of the Draft Chek Keng OZP No. S/NE-CK/B
Appendix III	Explanatory Statement of the Draft Chek Keng OZP No. S/NE-CK/B
Appendix IV	Planning Report on Chek Keng
Appendix V	Proposal by the Kadoorie Farm & Botanic Garden Corporation (KFBG)
Appendix VI	Proposal by the Indigenous Inhabitant Representative (IIR) of Chek Keng
Appendix VII	Planning Assessment on the Proposals of KFBG and IIR

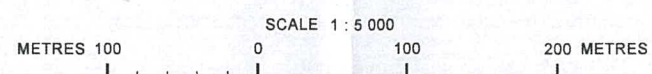


LEGEND

- [] PROPOSED PLANNING SCHEME BOUNDARY
- COUNTRY PARK

PROPOSED PLANNING SCHEME AREA

CHEK KENG



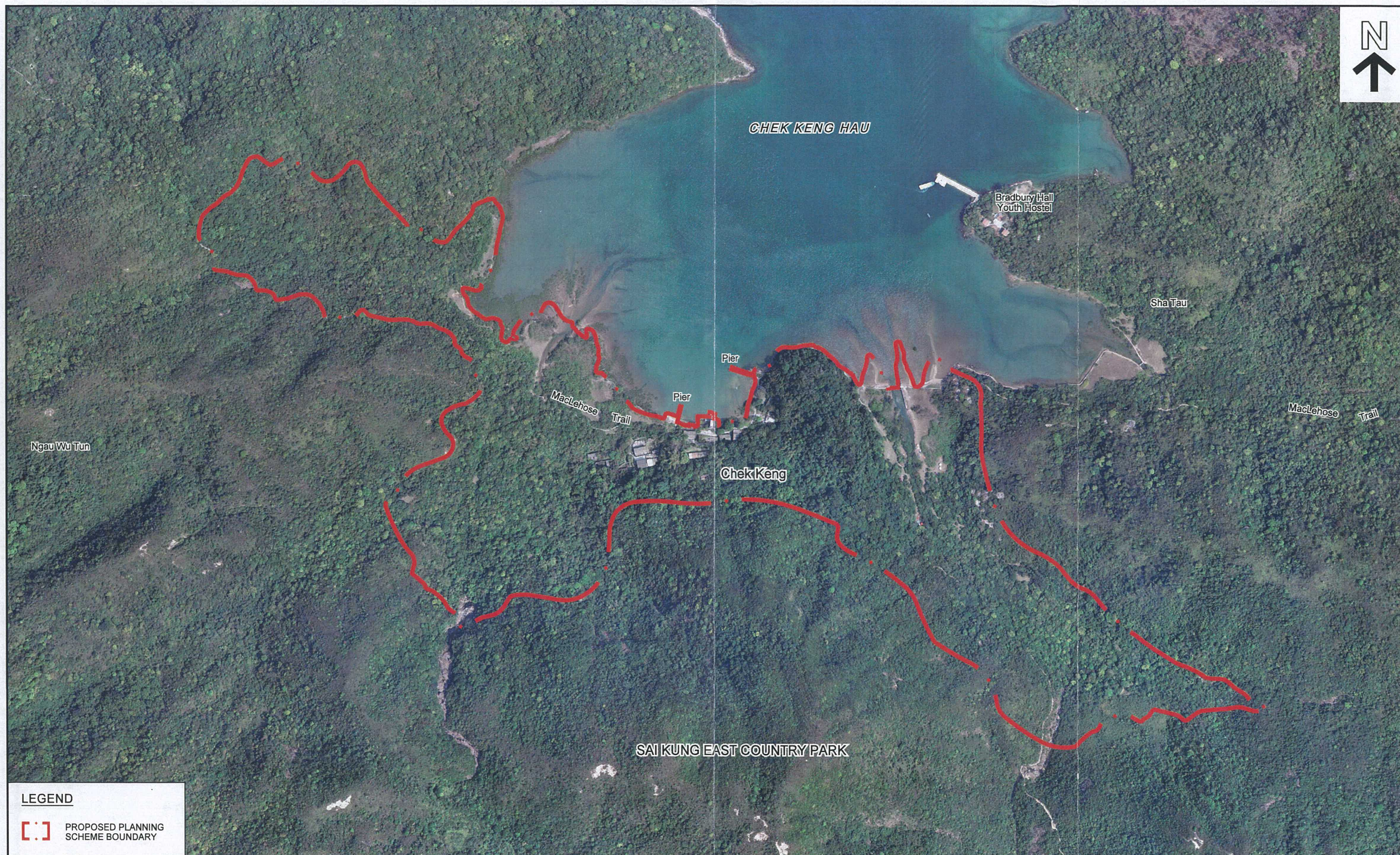
PLANNING DEPARTMENT




REFERENCE No.
M/CPE/CK/14/2

PLAN
1

EXTRACT PLAN PREPARED ON 17.11.2014
BASED ON SURVEY SHEETS No. 8-NE-16A/B/C/D,
17A/B/C/D, 21A/B AND 22A/B



LEGEND

 PROPOSED PLANNING
SCHEME BOUNDARY

AERIAL PHOTO

CHEK KENG

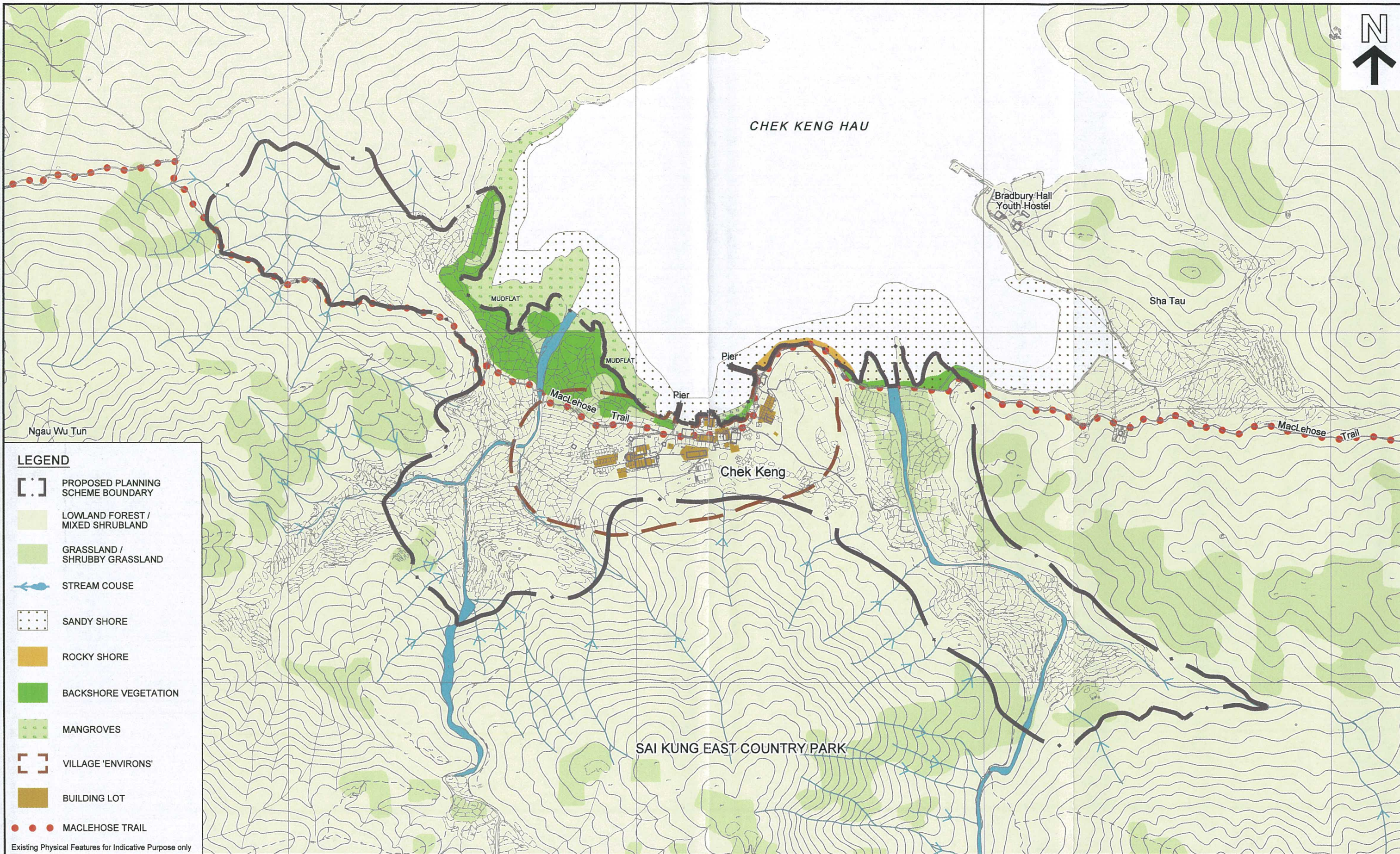
PLANNING DEPARTMENT



EXTRACT PLAN PREPARED ON 27.11.2014
BASED ON AERIAL PHOTOS No. CS49360-64
AND CS49620-24 TAKEN ON 23.3.2014
BY LANDS DEPARTMENT

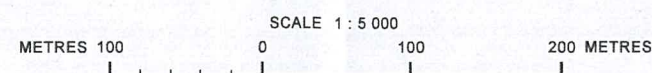
REFERENCE No.
M/CPE/CK/14/2

PLAN
2



VILLAGE 'ENVIRONS' AND EXISTING PHYSICAL FEATURES

CHEK KENG



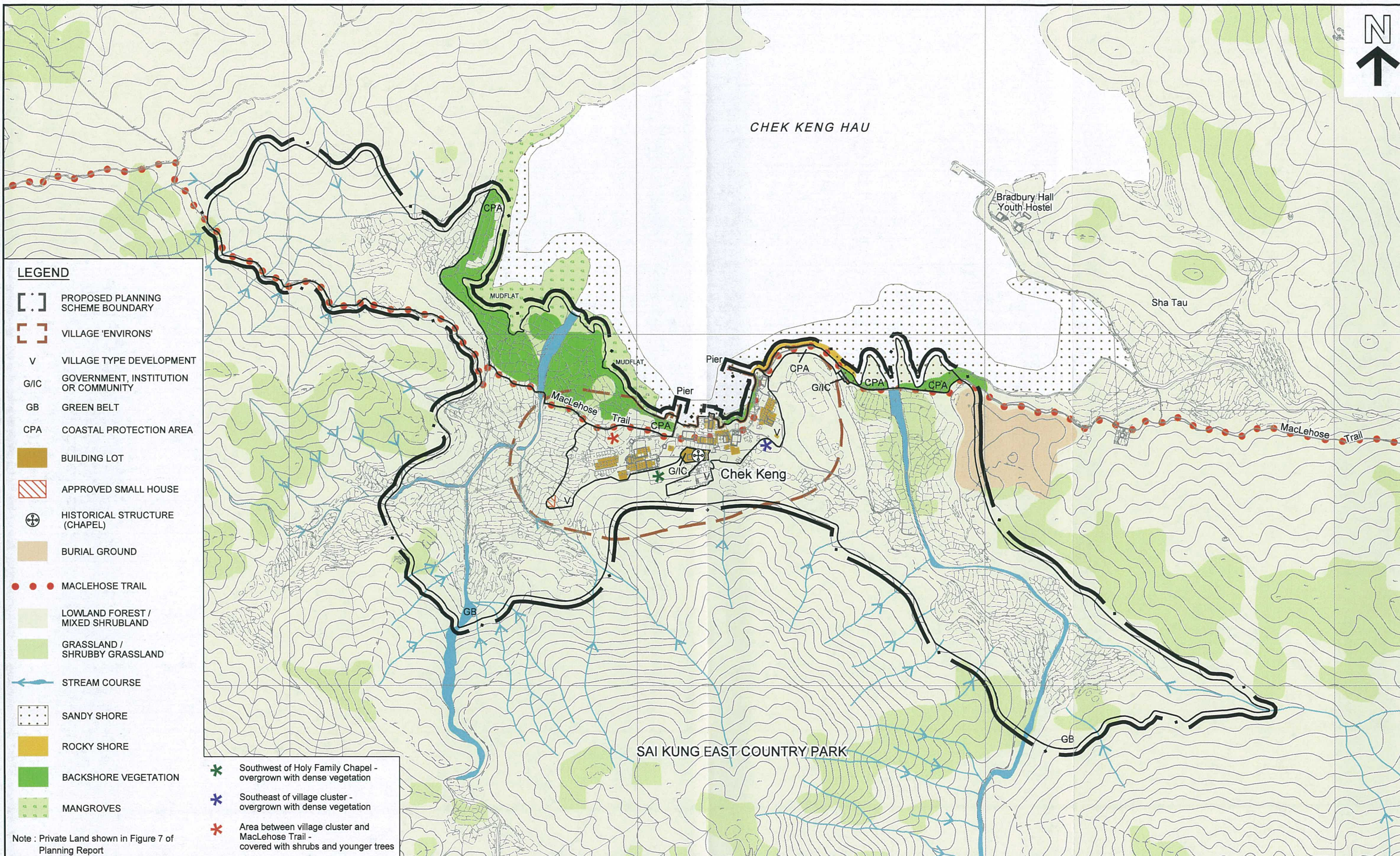
PLANNING DEPARTMENT



REFERENCE No.
M/CPE/CK/14/2

PLAN
3

EXTRACT PLAN PREPARED ON 26.11.2014
BASED ON SURVEY SHEETS No. 8-NE-16A/B/C/D,
17A/B/C/D, 21A/B AND 22A/B



DEVELOPMENT CONSTRAINTS AND PROPOSED LAND USES

CHEK KENG

SCALE 1 : 5 000
METRES 100 0 100 200 METRES

PLANNING DEPARTMENT



REFERENCE No.
M/CPE/CK/14/2

PLAN
4

EXTRACT PLAN PREPARED ON 16.12.2014
BASED ON SURVEY SHEETS No. 8-NE-16A/B/C/D,
17A/B/C/D, 21A/B AND 22A/B



圖例
NOTATION

ZONES

- VILLAGE TYPE DEVELOPMENT V
- GOVERNMENT, INSTITUTION OR COMMUNITY GIC
- GREEN BELT GB
- COASTAL PROTECTION AREA CPA

地帶

- 鄉村式發展
- 政府、機構或社區
- 綠化地帶
- 海岸保護區

MISCELLANEOUS

- BOUNDARY OF PLANNING SCHEME
- BOUNDARY OF COUNTRY PARK
- MAXIMUM BUILDING HEIGHT (IN NUMBER OF STOREYS)

其他

- 規劃範圍界線
- 郊野公園界線
- 最高建築物高度 (樓層數目)

土地用途及面積一覽表
SCHEDULE OF USES AND AREAS

USES	大約面積及百分率 APPROXIMATE AREA & %		用途
	公頃 HECTARES	% 百分率	
VILLAGE TYPE DEVELOPMENT	2.24	6.45	鄉村式發展
GOVERNMENT, INSTITUTION OR COMMUNITY	0.08	0.23	政府、機構或社區
GREEN BELT	28.82	82.95	綠化地帶
COASTAL PROTECTION AREA	3.60	10.36	海岸保護區
TOTAL PLANNING SCHEME AREA	34.74	100.00	規劃範圍總面積

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

香港城市規劃委員會依據城市規劃條例擬備的赤徑分區計劃大綱圖
TOWN PLANNING ORDINANCE, HONG KONG TOWN PLANNING BOARD
CHEK KENG - OUTLINE ZONING PLAN

SCALE 1:5 000 比例尺
METRES 100 0 200 400 600 800 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/NE-CK/B

DRAFT CHEK KENG OUTLINE ZONING PLAN NO. S/NE-CK/B

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

NOTES

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

- (1) These Notes show the uses or developments on land falling within the boundaries of the Plan which are always permitted and which may be permitted by the Town Planning Board, with or without conditions, on application. Where permission from the Town Planning Board for a use or development is required, the application for such permission should be made in a prescribed form. The application shall be addressed to the Secretary of the Town Planning Board, from whom the prescribed application form may be obtained.
- (2) Any use or development which is always permitted or may be permitted in accordance with these Notes must also conform to any other relevant legislation, the conditions of the Government lease concerned, and any other Government requirements, as may be applicable.
- (3) No action is required to make the use of any land or building which was in existence immediately before the first publication in the Gazette of the notice of the draft development permission area plan conform to this Plan, provided such use has continued since it came into existence. Any material change of such use or any other development (except minor alteration and/or modification to the development of the land or building in respect of such use which is always permitted) must be always permitted in terms of the Plan or in accordance with a permission granted by the Town Planning Board.
- (4) A use or development of any land or building permitted under an earlier draft or approved plan including development permission area plan for the area and effected or undertaken during the effective period of that plan is always permitted under this Plan. Any material change of such use or any other development (except minor alteration and/or modification to the completed development of the land or building which is always permitted) must be always permitted in terms of the Plan or in accordance with a permission granted by the Town Planning Board.
- (5) Except to the extent that paragraph (3) or (4) applies, any use or development falling within the boundaries of the Plan and also within the boundaries of the draft development permission area plan, unless always permitted in terms of the Plan, shall not be undertaken or continued on or after the date of the first publication in the Gazette of the notice of the draft development permission area plan without permission from the Town Planning Board.
- (6) Except as otherwise specified by the Town Planning Board, when a use or material change of use is effected or a development or redevelopment is undertaken, as always permitted in terms of the Plan or in accordance with a permission granted by the Town Planning Board, all permissions granted by the Town Planning Board in respect of the site of the use or material change of use or development or redevelopment shall lapse.

- (7) Alignment of roads and boundaries between zones may be subject to minor adjustments as detailed planning proceeds.
- (8) The following uses or developments are always permitted on land falling within the boundaries of the Plan except (a) where the uses or developments are specified in Column 2 of the Notes of individual zones or (b) as provided in paragraph (9) in relation to areas zoned “Coastal Protection Area”:
- (a) maintenance, repair or demolition of a building;
 - (b) provision, maintenance or repair of plant nursery, amenity planting, open space, rain shelter, refreshment kiosk, footpath, bus/public light bus stop or lay-by, cycle track, taxi rank, public utility pipeline, electricity mast, lamp pole, telephone booth, telecommunications radio base station, automatic teller machine and shrine;
 - (c) maintenance or repair of road, watercourse, nullah, sewer and drain;
 - (d) geotechnical works, local public works, road works, sewerage works, drainage works, environmental improvement works, marine related facilities and waterworks (excluding works on service reservoir) and such other public works co-ordinated or implemented by Government;
 - (e) rebuilding of New Territories Exempted House;
 - (f) replacement of an existing domestic building, i.e. a domestic building which was in existence on the date of the first publication in the Gazette of the notice of the draft development permission area plan, by a New Territories Exempted House; and
 - (g) provision, maintenance or repair of a grave of an indigenous New Territories villager or a locally based fisherman and his family members for which permission has been obtained from Government.
- (9) In areas zoned “Coastal Protection Area”,
- (a) the following uses or developments are always permitted:
 - (i) maintenance or repair of plant nursery, amenity planting, sitting out area, rain shelter, refreshment kiosk, road, watercourse, nullah, public utility pipeline, electricity mast, lamp pole, telephone booth, shrine and grave;
 - (ii) geotechnical works, local public works, road works, sewerage works, drainage works, environmental improvement works, marine related facilities, waterworks (excluding works on service reservoir) and such other public works co-ordinated or implemented by Government; and
 - (iii) provision of amenity planting by Government; and

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

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

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

road and on-street vehicle park.

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

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

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

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

- (12) Unless otherwise specified, all building, engineering and other operations incidental to and all uses directly related and ancillary to the permitted uses and developments within the same zone are always permitted and no separate permission is required.

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

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

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

DRAFT CHEK KENG
OUTLINE ZONING PLAN NO. S/NE-CK/B

Schedule of Uses

	<u>Page</u>
VILLAGE TYPE DEVELOPMENT	1
GOVERNMENT, INSTITUTION OR COMMUNITY	3
GREEN BELT	5
COASTAL PROTECTION AREA	7

VILLAGE TYPE DEVELOPMENT

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

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

Eating Place

Library

School

Shop and Services

(Please see next page)

VILLAGE TYPE DEVELOPMENT (Cont'd)Planning Intention

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

Remarks

- (a) No new development, or addition, alteration and/or modification to or redevelopment of an existing building (except development or redevelopment to those annotated with #) shall result in a total development and/or redevelopment in excess of a maximum building height of 3 storeys (8.23m) or the height of the building which was in existence on the date of the first publication in the Gazette of the notice of the draft development permission area plan, whichever is the greater.
- (b) Based on the individual merits of a development or redevelopment proposal, minor relaxation of the building height restriction stated in paragraph (a) above may be considered by the Town Planning Board on application under section 16 of the Town Planning Ordinance.
- (c) Any diversion of streams or filling of pond, including that to effect a change of use to any of those specified in Columns 1 and 2 above or the uses or developments always permitted under the covering Notes (except public works co-ordinated or implemented by Government, and maintenance, repair or rebuilding works), shall not be undertaken or continued on or after the date of the first publication in the Gazette of the notice of the draft development permission area plan without the permission from the Town Planning Board under section 16 of the Town Planning Ordinance.

GOVERNMENT, INSTITUTION OR COMMUNITY

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

(Please see next page)

GOVERNMENT, INSTITUTION OR COMMUNITY (Cont'd)

Planning Intention

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

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 building height in terms of number of storeys as stipulated on the Plan, or the height of the building which was in existence on the date of the first publication in the Gazette of the notice of the draft development permission area plan, whichever is the greater.
- (b) Based on the individual merits of a development or redevelopment proposal, minor relaxation of the building height restriction stated in paragraph (a) above may be considered by the Town Planning Board on application under section 16 of the Town Planning Ordinance.

GREEN BELT

<p>Column 1</p> <p>Uses always permitted</p>	<p>Column 2</p> <p>Uses that may be permitted with or without conditions on application to the Town Planning Board</p>
<p>Agricultural Use</p> <p>Barbecue Spot</p> <p>Government Use (Police Reporting Centre only)</p> <p>Nature Reserve</p> <p>Nature Trail</p> <p>On-Farm Domestic Structure</p> <p>Picnic Area</p> <p>Public Convenience</p> <p>Tent Camping Ground</p> <p>Wild Animals Protection Area</p>	<p>Animal Boarding Establishment</p> <p>Broadcasting, Television and/or Film Studio</p> <p>Burial Ground</p> <p>Columbarium (within a Religious Institution or extension of existing Columbarium only)</p> <p>Crematorium (within a Religious Institution or extension of existing Crematorium only)</p> <p>Field Study/Education/Visitor Centre</p> <p>Government Refuse Collection Point</p> <p>Government Use (not elsewhere specified)</p> <p>Helicopter Landing Pad</p> <p>Holiday Camp</p> <p>House (other than rebuilding of New Territories Exempted House or replacement of existing domestic building by New Territories Exempted House permitted under the covering Notes)</p> <p>Petrol Filling Station</p> <p>Pier</p> <p>Place of Recreation, Sports or Culture</p> <p>Public Transport Terminus or Station</p> <p>Public Utility Installation</p> <p>Public Vehicle Park (excluding container vehicle)</p> <p>Radar, Telecommunications Electronic Microwave Repeater, Television and/or Radio Transmitter Installation</p>

(Please see next page)

GREEN BELT (Cont'd)

<hr/> <p>Column 1</p> <p>Uses always permitted</p> <hr/>	<p>Column 2</p> <p>Uses that may be permitted with or without conditions on application to the Town Planning Board</p> <hr/>
	<p>Religious Institution</p> <p>Residential Institution</p> <p>Rural Committee/Village Office</p> <p>School</p> <p>Service Reservoir</p> <p>Social Welfare Facility</p> <p>Utility Installation for Private Project</p>

Planning Intention

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

Remarks

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

COASTAL PROTECTION AREA

Column 1 Uses always permitted	Column 2 Uses that may be permitted with or without conditions on application to the Town Planning Board
Agricultural Use (other than Plant Nursery) Nature Reserve Nature Trail On-Farm Domestic Structure Wild Animals Protection Area	Field Study/Education/Visitor Centre Government Use House (Redevelopment only) Public Convenience Public Utility Installation Radar, Telecommunications Electronic Microwave Repeater, Television and/or Radio Transmitter Installation

Planning Intention

This zoning is intended to conserve, protect and retain the natural coastlines and the sensitive coastal natural environment, including attractive geological features, physical landform or area of high landscape, scenic or ecological value, with a minimum of built development. It may also cover areas which serve as natural protection areas sheltering nearby developments against the effects of coastal erosion.

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

(Please see next page)

COASTAL PROTECTION AREA (Cont'd)

Remarks

- (a) No redevelopment, including alteration and/or modification, of an existing house shall result in a total redevelopment in excess of the plot ratio, site coverage and height of the house which was in existence on the date of the first publication in the Gazette of the notice of the draft development permission area plan.
- (b) Any diversion of streams, filling of land/pond or excavation of land, including that to effect a change of use to any of those specified in Columns 1 and 2 above or the uses or developments always permitted under the covering Notes, shall not be undertaken or continued on or after the date of the first publication in the Gazette of the notice of the draft development permission area plan without the permission from the Town Planning Board under section 16 of the Town Planning Ordinance.

DRAFT CHEK KENG
OUTLINE ZONING PLAN NO. S/NE-CK/B

EXPLANATORY STATEMENT

DRAFT CHEK KENG
OUTLINE ZONING PLAN NO. S/NE-CK/B

EXPLANATORY STATEMENT

<u>CONTENTS</u>	<u>Page</u>
1. INTRODUCTION	1
2. AUTHORITY FOR THE PLAN AND PROCEDURE	1
3. OBJECT OF THE PLAN	2
4. NOTES OF THE PLAN	2
5. THE PLANNING SCHEME AREA	2
6. POPULATION	3
7. OPPORTUNITIES AND CONSTRAINTS	3
8. GENERAL PLANNING INTENTION	6
9. LAND-USE ZONINGS	
9.1 Village Type Development	6
9.2 Government, Institution or Community	8
9.3 Green Belt	8
9.4 Coastal Protection Area	9
10. CULTURAL HERITAGE	10
11. COMMUNICATIONS	10
12. UTILITY SERVICES	11
13. IMPLEMENTATION	11
14. PLANNING CONTROL	11

DRAFT CHEK KENG
OUTLINE ZONING PLAN NO. S/NE-CK/B

(Being 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 draft Chek Keng Outline Zoning Plan (OZP) No. S/NE-CK/B. 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 14 July 2011, under the power delegated by the Chief Executive (CE), the Secretary for Development (SDEV) directed the Board, under section 3(1)(b) of the Town Planning Ordinance (the Ordinance), to prepare a Development Permission Area (DPA) Plan for the Chek Keng area.
- 2.2 On 4 May 2012, the draft Chek Keng DPA Plan No. DPA/NE-CK/1 was exhibited for public inspection under section 5 of the Ordinance. During the two-month exhibition period, 9 representations were received. On 27 July 2012, the Board published the representations for public comment for three weeks and no comment was received. After giving consideration to the representations on 18 January 2013, the Board decided not to propose any amendment to the draft DPA Plan to meet the representations.
- 2.3 On 30 April 2013, the CE in Council (CE in C), under section 9(1)(a) of the Ordinance, approved the draft Chek Keng DPA Plan, which was subsequently renumbered as DPA/NE-CK/2. On 10 May 2013, the approved Chek Keng DPA Plan No. DPA/NE-CK/2 was exhibited for public inspection under section 9(5) of the Ordinance.
- 2.4 On 16 October 2014, under the power delegated by the CE, the SDEV directed the Board, under section 3(1)(a) of the Ordinance, to prepare an OZP to cover the Chek Keng area.
- 2.5 On XX XXX 2015, the draft Chek Keng OZP No. S/NE-CK/B (the Plan) was exhibited for public inspection under section 5 of the Ordinance.

3. OBJECT OF THE PLAN

- 3.1 The object of the Plan is to indicate the broad land-use zonings for the area of Chek Keng so that development and redevelopment within the area of Chek Keng can be put under statutory planning control. It also provides the planning framework for preparing more detailed non-statutory plans which form the basis for public works planning and site reservation for various uses.
- 3.2 The Plan is to illustrate the broad principles of development and planning control only. It is a small-scale plan and the road alignments and boundaries between the land-use zones may be subject to minor alterations as detailed planning proceeds.

4. NOTES OF THE PLAN

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

5. THE PLANNING SCHEME AREA

- 5.1 The Area, covering a total area of about 34.74 ha, is surrounded by the Sai Kung East Country Park except where it fronts onto Chek Keng Hau in the north, one of the sea bays along the northern coast of the Country Park.
- 5.2 MacLehose Trail traverses the Area from east to west, largely dividing the lower seaside area mainly with natural coastline and features to its north from the higher landside area with a village cluster and vegetated slopes/valleys to its south.
- 5.3 Surrounded by the Sai Kung East Country Park on three sides and comprising mainly woodlands, shrublands, grasslands, streams, sandy/rocky shore with cliff, backshore vegetation and mangroves, the Area forms part of the wider natural environment of the Country Park. The woodland is ecologically-linked to the natural habitats in the Country Park and supports protected plant species. Uncommon plant species have also been found in the Area. The intertidal mudflat supporting various species of mangroves and a high diversity of mangrove fauna can be found straddling the edge of the Area and the sea. Backshore vegetation largely extends from the intertidal mudflat southward to the MacLehose Trail and westward along the coast, forming a transition

between the mangroves and the woodland.

- 5.4 Fronting onto the sea bay with the village situated in its central part and two natural streams flowing through the valleys, the Area forms a continuous scenic belt at the Chek Keng Hau along the MacLehose Trail. In general, the Area is natural and rural in character and has high landscape and scenic value.
- 5.5 The Chek Keng Village is the only recognized village within the Area. The village houses are mostly abandoned with many in dilapidated condition or become ruins. The Holy Family Chapel (聖家小堂), built in 1874 and now vacant, is a Grade 2 historic building worthy of preservation. There is a permitted burial ground on the hillslopes along the northeastern edge of the Area.

6. POPULATION

According to the 2011 Census, the total population of the Area was about 30 persons. It is expected that the total planned population of the Area would be about 330 persons mainly attributed to village expansion.

7. OPPORTUNITIES AND CONSTRAINTS

7.1 Opportunities

7.1.1 Conservation and Natural Landscape

Surrounded by the Sai Kung East Country Park on three sides and comprising mainly woodlands, shrublands, grasslands, streams, sandy/rocky shore with cliff, backshore vegetation and mangroves, the Area forms part of the wider natural environment of the Country Park. The woodland is ecologically-linked to the natural habitats in the Country Park and supports protected plant species. Uncommon plant species have also been found in the Area. The intertidal mudflat supporting various species of mangroves and a high diversity of mangrove fauna can be found straddling the edge of the Area and the sea. Backshore vegetation largely extends from the intertidal mudflat southward to the MacLehose Trail and westward along the coast, forming a transition between the mangroves and the woodland. Fronting onto the sea bay with the village situated in its central part and two natural streams flowing through the valleys, the Area forms a continuous scenic belt at the Chek Keng Hau along the MacLehose Trail. In general, the Area is natural and rural in character, has high landscape and scenic value. It is worthy of conservation while the scale of the village development should be compatible with the surrounding landscape and rural setting.

7.1.2 Tourism, Recreation and Agriculture Potential

The popular MacLehose Trail traverses the Area, connecting it with Pak Tam Road to the west, and Tai Long Wan, High Island Reservoir and Pak Tam Chung to its east and south. There are a variety of recreational facilities in the nearby Sai Kung East and West Country Parks, including a network of hiking trails, 13 camp sites, 36 barbecue sites (including the Pak Tam Chung Barbecue Site for the Disabled) and the Pak Tam Chung Visitor Centre. The Bradbury Hall Youth Hostel is in close proximity to the northeast of the Area and the Jockey Club Wong Shek Water Sports Centre is located near Wong Shek Pier, which is accessible by boats from Chek Keng. There is little agricultural activity in the Area. Although the extensive abandoned farmland in the Area should possess potential for agricultural activities, as most of these areas have already been turned into shrubland or woodland after being abandoned for decades, clearance of vegetation will be required to return the land for agricultural activities.

7.2 Constraints

7.2.1 Ecological Significance

Surrounded by the Sai Kung East Country Park on three sides and comprising mainly woodlands, shrublands, grasslands, streams, sandy/rocky shore with cliff, backshore vegetation and mangroves, the Area forms part of the wider natural environment of the Country Park. The woodland is ecologically-linked to the natural habitats in the Country Park and supports protected plant species, such as *Aquilaria sinensis* (土沉香) and *Cibotium barometz* (金毛狗). Uncommon plant species such as *Zanthoxylum ailanthoides* (椿葉花椒) and *Zoysia sinica* (中華結縷草) have also been found in the Area. The intertidal mudflat straddling the edge of the Area and the sea supports seven species of mangroves including the uncommon *Heritiera littoralis* (銀葉樹) and a high diversity of mangrove fauna. Backshore vegetation largely extends from the intertidal mudflat southward to the MacLehose Trail and westward along the coast, forming a transition between the mangroves and the woodland. Dominant flora species include the *Paliurus ramosissimus* (馬甲子), *Hibiscus tiliaceus* (黃槿) and *Cerbera manghas* (海杧果). The backshore vegetation areas are ecologically linked with mangroves and provide habitats for Sesarmine Crabs. The two natural streams in the eastern and western parts of the Area flow through the valleys from south to north into the sea. There is neither *fung shui* woodland nor Ecologically Important Stream (EIS) in the Area, and the terrestrial habitats consist largely of common native plant species. From the nature conservation perspective, developments that may adversely affect the natural character and the ecologically sensitive areas will not be recommended.

7.2.2 Landscape Character

With reference to the 'Landscape Value Mapping of Hong Kong (2005)', the Area is characterized as settled valley landscape of high landscape and scenic value complementing the overall naturalness and landscape beauty of the surrounding Sai Kung East Country Park. The second section of MacLehose Trail, a popular hiking trail of Hong Kong, passes through the Area. Most of the natural landscape is largely undisturbed, and the important landscape resources include woodland on steep rolling slopes, streams, low-lying abandoned agricultural land, mudflats, sandy/rocky shore with cliff, estuarine areas with mangroves/backshore vegetation, and some feature trees with high amenity value in the village and near the Holy Family Chapel. From the landscape planning perspective, any large scale development with associated utilities installation and slope formation work is not compatible with the existing landscape context. Furthermore, sufficient landscape buffer should be provided to significant landscape resources in the Area.

7.2.3 Cultural Heritage

The Holy Family Chapel (聖家小堂) is a Grade 2 historic building worthy of preservation. Prior consultation with the Antiquities and Monuments Office of the Leisure and Cultural Services Department should be made if any development, redevelopment or rezoning proposals might affect the above graded historic building and its immediate environs.

7.2.4 Burial Grounds

A large piece of permitted burial ground for indigenous villagers is located on the hillslopes along the northeastern fringe of the Area. Whilst the majority of the burial ground lies outside the Area and within the Country Park, its western part lies within the Area and is not suitable for any development.

7.2.5 Transportation

The Area is not served by any vehicular access and is only accessible by walking trails, including the popular MacLehose Trail which connects it with Pak Tam Road to the west, and Tai Long Wan, High Island Reservoir and Pak Tam Chung to its east and south. Part of the MacLehose Trail is within the Area. It is a popular hiking trail and should be maintained for free public access and preserved from developments in the future. There are two small piers near the village and another pier to the northeast of the Area. The Area is also accessible by boats from the nearby Wong Shek, or from the more distant Ma Liu Shui, Tai Po.

7.2.6 Sewerage

There is no existing or planned public sewer for the Area. Any increase in population or number of visitors to the Area or further recreation/residential developments will require additional facilities.

7.2.7 Other Infrastructure and Utility Services

The Area is provided with electricity and telephone services. Potable water supply has been provided to the existing facilities and village houses in the Area. However, there is no existing or planned drainage system in the Area.

7.2.8 Geotechnical Constraint

The Area is located below steep natural terrain with a long history of instability and may be affected by potential natural terrain landslide hazards. For developments within the Area, natural terrain hazard studies may be required to ascertain the scale of the hazards and to provide suitable hazard mitigation measures, if found necessary, as part of the developments.

8. GENERAL PLANNING INTENTION

- 8.1 The Area forms an integral part of the natural system of the adjoining Sai Kung East Country Park with a wide spectrum of natural habitats including, inter alia, woodlands, shrublands, grasslands, streams, sandy/rocky shore with cliff, backshore vegetation and mangroves which should be preserved and protected. In general, the Area is natural and rural in character and has high landscape and scenic value. The general planning intention of the Area is to protect its high conservation and landscape value which complements the overall naturalness and the landscape beauty of the surrounding Country Park.
- 8.2 Apart from the environmental and ecological considerations, development in the Area is constrained by limited transport and infrastructural provisions. It is also intended to consolidate village development so as to avoid undesirable disturbances to the natural environment and overtaking the limited infrastructure in the Area.

9. LAND-USE ZONINGS

9.1 “Village Type Development” (“V”) : Total Area 2.24 ha

- 9.1.1 The planning intention of this zone is to designate both the existing recognized village and areas of land considered suitable for village expansion. Land within this zone is primarily intended for development of Small Houses by indigenous villagers. It is also intended to concentrate village type development within this zone for a more

orderly development pattern, efficient use of land and provision of infrastructures and services. Selected commercial and community uses serving the needs of the villagers and in support of the village development are always permitted on the ground floor of a New Territories Exempted House. Other commercial, community and recreational uses may be permitted on application to the Board.

- 9.1.2 Chek Keng is the only recognized village in the Area. The boundaries of the “V” zone are drawn up having regard to the village ‘environs’, the number of outstanding Small House applications, Small House demand forecast, local topography and site constraints. Areas of difficult terrain, dense vegetation, stream courses and burial grounds have been avoided as far as possible.
- 9.1.3 No new development, or addition, alteration and/or modification to or redevelopment of an existing building shall result in a total development and/or redevelopment in excess of a maximum building height of 3 storeys (8.23m) or the height of the building which was in existence on the date of the first publication in the Gazette of the notice of the draft DPA plan, whichever is the greater. Application for minor relaxation of these restrictions would be considered by the Board based on individual merits, taking into account site constraints, innovative architectural design and planning merits that would enhance the amenity of the locality.
- 9.1.4 As diversion of streams or filling of pond may cause adverse drainage impacts on the adjacent areas and adverse impacts on the natural environment, permission from the Board is required for such activities except public works co-ordinated or implemented by Government, and maintenance, repair or rebuilding works.
- 9.1.5 In accordance with the Environment, Transport and Works Bureau’s Technical Circular (Works) No. 5/2005, under the current administrative practice, development proposals/submissions that may affect natural streams/rivers, the approving/processing authorities at various stages of the development should consult and collate comments from the AFCD and relevant authorities and incorporate relevant comments/advice as conditions of approval wherever possible. Accordingly, LandsD, when processing Small House grant and applications in close proximity to existing stream courses, should consult concerned departments including AFCD, Environmental Protection Department (EPD) and PlanD to ensure that all relevant departments would have adequate opportunity to review and comment on the applications.
- 9.1.6 The “V” zone in the Area is located below steep natural terrain with a long history of instability and may be affected by potential natural terrain landslide hazards. For development within the Area, the developer(s) may be required to carry out natural terrain hazard study

and to provide suitable hazard mitigation measures, if found necessary, as part of the development.

- 9.1.7 There is no existing or planned public sewer for the Area. For Small House development, the design and construction of the septic tank and soakaway systems need to comply with relevant standards and regulations, such as EPD's Practice Note for Professional Persons (ProPECC PN) 5/93 – "*Drainage Plans subject to Comment by the Environmental Protection Department*", for the protection of the water quality of the Area.

9.2 "Government, Institution or Community" ("G/IC") : Total Area 0.08ha

- 9.2.1 The planning intention of this zone is 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.
- 9.2.2 The major existing GIC facilities under this zone include a public toilet and a refuse collection point along MacLehose Trail in the eastern part of the Area, as well as the Holy Family Chapel at the southern fringe of Chek Keng Village.
- 9.2.3 To preserve the rural and low-rise character of the Area as well as provide spatial and visual relief, development/redevelopment within this zone should be restricted to a maximum building height as stipulated on the Plan (i.e. one storey) or the height of the building which was in existence on the date of the first publication in the Gazette of the notice of the draft DPA plan, whichever is greater.
- 9.2.4 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 application will be considered on its individual planning merits.

9.3 "Green Belt" ("GB") : Total Area 28.82ha

- 9.3.1 The planning intention of this zone is primarily for defining the limits of urban and sub-urban development areas by natural features and to contain urban sprawl as well as to provide passive recreational outlets. There is a general presumption against development within this zone.
- 9.3.2 The "GB" zone comprising mainly woodlands, shrublands, grasslands and streams, can provide a buffer between the village type developments and the Sai Kung East Country Park and conserve the natural and rural character of the Area.

- 9.3.3 The “GB” zone also comprises the western part of the permitted burial ground on the hillslopes along the northeastern fringe of the Area. It has been in existence for many years, and is considered as existing use intended for the burial of deceased indigenous villagers in the Area. To respect the local ritual and tradition, burial activities within this zone are generally tolerated.
- 9.3.4 There is a general presumption against development within this zone. Development in this zone will be strictly controlled. Development proposals will be considered by the Board on individual merits taking into account the relevant Town Planning Board Guidelines.
- 9.3.5 As diversion of streams, filling of land/pond or excavation of land may cause adverse drainage impacts on the adjacent areas and adverse impacts on the natural environment, permission from the Board is required for such activities except public works co-ordinated or implemented by Government, and maintenance, repair or rebuilding works.

9.4 Coastal Protection Area (“CPA”): Total Area 3.60 ha

- 9.4.1 This zone is intended to conserve, protect and retain the natural coastlines and the sensitive coastal natural environment, including attractive geological features, physical landform or area of high landscape, scenic or ecological value, with a minimum of built development. It may also cover areas which serve as natural protection areas sheltering nearby developments against the effects of coastal erosion. There is a general presumption against development in this zone. In general, only developments that are needed to support the conservation of the existing natural landscape or scenic quality of the area or are essential infrastructure projects with overriding public interest may be permitted.
- 9.4.2 This zone mainly covers the coastal area along Chek Keng Hau to the north of MacLehose Trail (with the exception of a few houses and ruins at the existing village cluster) and the cliff of the vegetated knoll to the south of the trail. It primarily consists of sandy/rocky shore with cliff, backshore vegetation, mangroves and stream estuaries. The intertidal mudflat straddling the edge of the Area and the sea supports seven species of mangroves including the uncommon *Heritiera littoralis* (銀葉樹) and a high diversity of mangrove fauna. Backshore vegetation is ecologically linked with mangroves and provides habitats for Sesarmine Crabs. This zone can also provide a buffer between the adjoining village area and the marine environment.

- 9.4.3 New residential development is not permitted under this zone. Redevelopment of existing houses may be permitted on application to the Board. The redevelopment of existing houses shall not result in a total redevelopment in excess of the plot ratio, site coverage and height of the house which was in existence on the date of the first publication of the draft DPA Plan.
- 9.4.4 Diversion of streams, filling of land/pond or excavation of land may cause adverse drainage impacts on adjacent areas and adverse impacts on the natural environment. In view of the conservation value of the area within this zone, permission from the Board is required for such activities.

10. CULTURAL HERITAGE

- 10.1 The Holy Family Chapel (聖家小堂), built in 1874, is a Grade 2 historic building worthy of preservation. The Chapel marks the endeavours of Catholic missionaries and their influence on village development in Tai Po from the 19th century to the early 20th century. In the years of the Japanese Occupation (1941-1945), the Chapel was used as a guerrilla base against the Occupation. In late 1980s, the Chapel was turned into a youth camp. It is now vacant.
- 10.2 The Antiquities Advisory Board (AAB) also released a number of new items in addition to the list of 1,444 historic buildings. These items are subject to the grading assessment by the AAB. Details of the list of 1,444 historic buildings and its new items have been uploaded onto the website of the AAB at <http://www.aab.gov.hk>.
- 10.3 Prior consultation with the Antiquities and Monuments Office of the Leisure and Cultural Services Department should be made if any development, redevelopment or rezoning proposals might affect the above graded historic building/structure, new items pending grading assessment and its/their immediate environs.

11. COMMUNICATIONS

Transport Network

The Area is not served by any vehicular access and is only accessible by walking trails, including the popular MacLehose Trail which connects it with Pak Tam Road to the west, and Tai Long Wan, High Island Reservoir and Pak Tam Chung to its east and south. Part of the MacLehose Trail is within the Area. It is a popular hiking trail and should be maintained for free public access and preserved from developments in the future. There are two small piers near the village and another pier to the northeast of the Area. The Area is also accessible by boats from the nearby Wong Shek, or from the more distant Ma Liu Shui, Tai Po.

12. UTILITY SERVICES

The Area is provided with electricity and telephone services. Potable water supply has been provided to the existing facilities and village houses in the Area. There are no existing or planned drainage and sewerage systems for the Area.

13. IMPLEMENTATION

- 13.1 The Plan provides a broad land-use framework for development control and implementation of planning proposals for the Area. More detailed plans will be prepared as a basis for public works planning and private developments.
- 13.2 At present, there is no overall programme for the provision of infrastructure within the Area. The implementation process will be gradual and may stretch over a long period of time depending on the availability of resources. It will be undertaken through the participation of both public and private sectors.
- 13.3 Notwithstanding the above, minor improvement works, e.g. access improvement and laying of utility services will be implemented through the Public Works Programme as and when resources are available. Private developments will be effected principally through private sector initiatives to develop or redevelop their properties in accordance with the zoned uses indicated on the Plan, provided that their proposals meet Government requirements.

14. PLANNING CONTROL

- 14.1 The types of permitted developments and uses on land within the Area are listed in the Notes of the Plan. Unless otherwise specified, all building, engineering and other operations incidental to and all uses directly related and ancillary to the permitted developments and uses within the same zone are always permitted and no separate permission is required.
- 14.2 Uses of land or building which were in existence immediately before the first publication in the Gazette of the notice of the draft DPA Plan and which are not in compliance with the terms of the Plan may have adverse impacts on the environment, drainage and traffic of the Area. Although no action is required to make such use conform to this Plan, any material change of such use or any other development (except minor alteration and/or modification to the development of the land or building in respect of such use which is always permitted) must be always permitted in terms of the Plan or, if permission is required, in accordance with a permission granted by the Board. The Board will consider these applications on their individual merits. Those alteration and/or modification works which may lead to an environmental improvement or upgrading to the Area may be considered favourably by the Board.
- 14.3 Planning applications to the Board will be assessed on individual merits. In general, the Board, in considering the planning applications, will take into

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

- 14.4 Any development, other than those referred to in paragraph 14.1 above or in conformity with this Plan or with the permission of the Board, undertaken or continued on land included in this Plan on or after the date of the first publication in the Gazette of the Notice of the draft DPA Plan may be subject to enforcement proceedings under the Ordinance. Any diversion of streams, filling of land/pond and excavation of land in the relevant zones on or after the date of the first publication in the Gazette of the Notice of the draft DPA Plan without permission from the Board may also be subject to enforcement proceedings. Moreover, there is a presumption against filling of ponds for temporary land uses/developments in conservation-related zonings, such as "CPA".

**TOWN PLANNING BOARD
DECEMBER 2014**

PLANNING REPORT ON CHEK KENG



SHA TIN, TAI PO & NORTH
DISTRICT PLANNING OFFICE
PLANNING DEPARTMENT
DECEMBER 2014



**PLANNING REPORT ON
CHEK KENG**

December 2014

<u>CONTENT</u>	<u>Page</u>		<u>Page</u>
1. INTRODUCTION		4. PLANNING PROPOSALS	
1.1 Purpose of the Planning Report	1	4.1 The Outline Zoning Plan	11
1.2 Background	1	4.2 Planning Objectives	11
		4.3 Planning Principles	11
		4.4 Land Use Proposals	12
2. THE STUDY AREA		5. IMPLEMENTATION	16
2.1 Location	2		
2.2 Natural Features	2	Table 1: Small House Demand in 2012 and 2014	
2.3 Historical Development	4		
2.4 Population and Employment	4		
2.5 Existing Land Uses	4		
2.6 Land Ownership	5		
2.7 Transportation and Access	5		
2.8 Infrastructure and Utility Services	5		
3. PLANNING ANALYSIS			
3.1 Strategic Planning Context	5		
3.2 Environment and Conservation Considerations	6		
3.3 Development Constraints	6		
3.4 Development Opportunities	8		
3.5 Development Pressure	9		
3.6 Development Proposals Received in the Course of Preparation of the Plan	10		

List of Figures

Figure 1	Location Plan
Figure 2	Chek Keng Development Permission Area Plan
Figure 3	Study Area
Figure 4	Aerial Photo
Figure 5a	Existing Physical Features
Figure 5b – 5f	Photos of Existing Physical Features
Figure 6a	Existing Land Uses
Figure 6b – 6d	Photos of Existing Land Uses
Figure 7	Land Ownership and Village ‘Environs’
Figure 8	Existing GIC, Infrastructural and Tourism-related Facilities
Figure 9	Ecological and Cultural Heritage Resources
Figure 10	Development Constraints
Figure 11	Suspected Illegal Incense Tree Felling on Government Land detected in September 2014
Figure 12	Proposed Land Uses

1. INTRODUCTION

1.1 Purpose of the Planning Report

The purpose of this Planning Report is to give an account of the background and an appraisal of the existing conditions, characteristics and development requirements of the Chek Keng area (the Area). It also aims at providing a basis for the preparation of an Outline Zoning Plan (OZP) for the Area and the formulation of a planning framework to guide future development.

1.2 Background

1.2.1 The Area, covering a total area of about 34.74 ha, is surrounded by the Sai Kung East Country Park except where it fronts onto Chek Keng Hau in the north, one of the sea bays along the northern coast of the Country Park (**Figure 1**).

1.2.2 Surrounded by the Sai Kung East Country Park on three sides and comprising mainly woodlands, shrublands, grasslands, streams, sandy/rocky shore with cliff, backshore vegetation and mangroves, the Area forms part of the wider natural environment of the Country Park. The Chek Keng Village, located in the middle of the Area and mostly abandoned, is the only recognized village in the Area. The Area, natural and rural in character, has high landscape and scenic value and is a popular hiking area.

1.2.3 Any large scale and uncontrolled development may affect the natural environment including the

ecological and landscape value of the Area. There was an urgent need to prepare a development permission area (DPA) plan for the Area to facilitate proper planning control and enforcement. Under the power delegated by the Chief Executive (CE), on 14.7.2011, the Secretary for Development directed the Town Planning Board (the Board) to prepare a draft plan designating the Area as a DPA.

1.2.4 The draft Chek Keng DPA Plan No. DPA/NE- CK/1 was exhibited for public inspection on 4.5.2012. During the plan exhibition period, a total of nine representations and no comment were received. After giving consideration to the representations on 18.1.2013, the Board decided not to propose any amendment to the draft DPA plan to meet the representations.

1.2.5 On 30.4.2013, the Chief Executive in Council (CE in C) approved the draft Chek Keng DPA Plan, which was subsequently renumbered as DPA/NE-CK/2 (**Figure 2**). On 10.5.2013, the approved Chek Keng DPA Plan No. DPA/NE- CK/2 was exhibited for public inspection under section 9(5) of the Town Planning Ordinance (the Ordinance).

1.2.6 Pursuant to section 20(5) of the Ordinance, the DPA Plan is effective for three years until 4.5.2015. On 16.10.2014, the CE, pursuant to section 3(1)(a) of the Ordinance, directed the Board to prepare an OZP for the Area.

2. **THE STUDY AREA**

2.1. **Location**

2.1.1 The Area, covering a total area of about 34.74 ha, is surrounded by the Sai Kung East Country Park except where it fronts onto Chek Keng Hau in the north, one of the sea bays along the northern coast of the Country Park. The location of the Area is shown in **Figure 3**.

2.1.2 The Area is not served by any vehicular access and is only accessible by walking trails, including the popular MacLehose Trail which connects it with Pak Tam Road to the west, and Tai Long Wan, High Island Reservoir and Pak Tam Chung to its east and south. Part of the MacLehose Trail is within the Area. There are two small piers near the village and another pier to the northeast of the Area. The Area is also accessible by boats from the nearby Wong Shek, or from the more distant Ma Liu Shui, Tai Po.

2.2. **Natural Features**

Physical Setting and Topography

2.2.1 Fronting onto a sea bay (Chek Keng Hau) to the north, the coastal part of the Area is largely flat except where a vegetated knoll protrudes into the sea bay in the eastern section. The MacLehose Trail traverses the Area from east to west, largely dividing the lower seaside area mainly with natural coastline and features to its north from the higher landside

area with rural land uses and vegetated slopes/valleys to its south.

2.2.2 To the north (sea side) of the MacLehose Trail is mainly the lower coastal area comprising sandy/rocky shore, stream estuaries and areas covered with backshore vegetation. Further to the north, there are mangroves in the intertidal mudflat straddling the edge of the Area and the sea. A few village houses and concrete platforms (mostly abandoned) and two small piers can also be found at the village cluster in the middle section of the coastal area. To the south (land side) of the MacLehose Trail and in the middle of the Area is the Chek Keng Village, with a cluster of village houses, ruins, a chapel site and a school site occupying various platforms sloping uphill. There is a protruding vegetated knoll in the eastern section of the coastal front which is flanked by a cliff of about 10m high along the southern side of the MacLehose Trail.

2.2.3 Facing to the north, Chek Keng Village is surrounded by densely vegetated slopes with woodland extending into the Sai Kung East Country Park. There are two natural streams flowing through the valleys, with some abandoned agricultural land, which has been colonized by woodland, shrubland and grassland, in the eastern and western parts of the Area. Overview of the Area is shown in **Figures 3 and 4**.

Natural Habitats (Figures 5a – 5f)

2.2.4 The Area forms part of the wider natural environment of the Sai Kung East Country Park. It mainly comprises woodlands, shrublands, grasslands, streams, sandy/rocky shore with cliff, backshore vegetation and mangroves, as well as village houses/ruins. Details of the natural habitats are listed below:

(a) Native Woodland, Shrubland and Grassland

- (i) The woodland supports protected plant species, such as *Aquilaria sinensis* (土沉香) and *Cibotium barometz* (金毛狗). Uncommon plant species such as *Zanthoxylum ailanthoides* (椿葉花椒) and *Zoysia sinica* (中華結縷草) have also been found in the Area.
- (ii) According to the Agriculture, Fisheries and Conservation Department (AFCD), the terrestrial habitats of the woodland consist largely of common native plant species.

(b) Abandoned Agricultural Land

- (i) Agricultural land in the Area has been left abandoned and largely overgrown with trees, shrubs and grasses. Those on both sides of the two natural streams are currently mainly covered by woodland in the upper sections, whereas patches of shrubland and grassland

are found in the lower sections.

- (ii) An area of ruderal habitat is present on the western side of the village cluster, between house ruins and MacLehose Trail. It appears to be abandoned agricultural land invaded by the ruderal vegetation such as weedy climbers and shrubs.

(c) Seashore Areas and Streams

- (i) To the north (sea side) of MacLehose Trail is mainly the lower coastal area comprising sandy/rocky shore, stream estuaries and areas covered with backshore vegetation. Further to the north, there are mangroves in the intertidal mudflat straddling the edge of the Area and the sea. The intertidal mudflat supports seven species of mangroves including the uncommon *Heritiera littoralis* (銀葉樹) and a high diversity of mangrove fauna.
- (ii) Backshore vegetation largely extends from the intertidal mudflat southward to the MacLehose Trail and westward along the coast, forming a transition between the mangroves and the woodland. Dominant flora species include the *Paliurus ramosissimus* (馬甲子), *Hibiscus tiliaceus* (黃槿) and *Cerbera manghas* (海杧果). The backshore vegetation areas are ecologically linked with mangroves and provide habitats

for Sesarmino Crabs¹.

- (iii) The two natural streams in the eastern and western parts of the Area flow through the valleys from south to north into the sea..

- (d) Within the Village Cluster

Bat species *Hipposideros armiger* (大蹄蝠) and *H. pomona* (小蹄蝠), which are very common in Hong Kong, have been recorded to roost in the abandoned village houses in the Area during certain periods of the year.

2.3 Historical Development

2.3.1 Chek Keng Village is a recognized village in the area of the Sai Kung North Heung. The village houses are mostly abandoned with many in dilapidated condition or become ruins.

2.3.2 The Holy Family Chapel (聖家小堂), built in 1874, is a Grade 2 historic building worthy of preservation. The Chapel marks the endeavours of Catholic missionaries and their influence on village development in Tai Po from the 19th century to the early 20th century. In the years of the Japanese Occupation (1941-1945), the Chapel was used as a guerrilla base against the Occupation. In late 1980s, the Chapel was turned into a youth camp.

¹ The diversity of Sesarmino Crabs is indicative to the “intactness” of the mangrove ecosystem.

2.4 Population and Employment

According to 2011 Census, the population of the Area was estimated to be about 30 persons. Considerable amount of agricultural land has been lying abandoned overgrown with trees, shrubs and grass.

2.5 Existing Land Uses (Figures 6a – 6d)

The area is natural and rural in character comprising mainly woodlands, shrublands, grasslands, streams, sandy/rocky shore with cliff, backshore vegetation and mangroves. Chek Keng Village is situated in the middle of the Area, with a cluster of village houses, ruins, a chapel site and a school site occupying part of the coastal front and various platforms sloping uphill. The major existing land uses include the following:

Village Type Development

2.5.1 The Chek Keng Village is the only recognized village within the Area. The village houses are mostly abandoned with many in dilapidated condition or become ruins.

2.5.2 According to District Lands Officer/ Tai Po, Lands Department (DLO/TP, LandsD), there are 20 outstanding Small House applications in the Area, and the 10-year Small House demand forecast provided by the Indigenous Inhabitant Representative (IIR) of Chek Keng is 254. There is one Small House application approved (in 2008) in

the Area, but construction at the site has not commenced.

Government, Institution or Community (GIC) Facilities

2.5.3 Major GIC facilities in the Area to meet the community needs include a single storey public toilet and a refuse collection point along MacLehose Trail in the eastern part of the Area.

2.5.4 Various GIC developments including the Holy Family Chapel and the ex-Chek Keng Ming Sun School (銘新學校), are currently vacant.

Cultural Heritage Resources

2.5.5 The Holy Family Chapel (聖家小堂), built in 1874, is a Grade 2 historic building worthy of preservation. The Chapel is a single-storey pitched roof building with a two-level section in the middle housing the priest's quarter, and an end section formerly housing a village school. In late 1980s, the Chapel was turned into a youth camp. The Chapel is now vacant.

Burial Grounds

2.5.6 There is a permitted burial ground on the hillslopes along the northeastern edge of the Area.

2.6 Land Ownership

About 62% of land in the Area is Government land. The remaining 38% are private land comprising abandoned agricultural land mainly on both sides of the two natural

streams and building lots in the middle of the Area (**Figure 7**).

2.7 Transportation and Access

At present, the Area is not served by any vehicular access and is only accessible by walking trails, including the popular MacLehose Trail which connects it with Pak Tam Road to the west, and Tai Long Wan, High Island Reservoir and Pak Tam Chung to its east and south (**Figure 8**). Part of the MacLehose Trail is within the Area. There are two small piers near the village and another pier to the northeast of the Area. The Area is also accessible by boats from the nearby Wong Shek, or from the more distant Ma Liu Shui, Tai Po.

2.8 Infrastructure and Utility Services

The Area is provided with electricity and telephone services. Potable water supply has been provided to the existing facilities and village houses in the Area. There are no existing and planned drainage and sewerage systems.

3. PLANNING ANALYSIS

3.1 Strategic Planning Context

3.1.1 Given the natural environment, its ecological and landscape value coupled with its limited accessibility due to lack of vehicular access, the planning framework for the Area should fundamentally be for preservation of the natural environment. Any large-scale development is not

recommended to minimize the encroachment onto the sensitive environment and to protect and enhance ecological and landscape conservation.

- 3.1.2 With reference to the 'Landscape Value Mapping of Hong Kong (2005)', the Area is characterized as settled valley landscape of high landscape and scenic value complementing the overall naturalness and landscape beauty of the surrounding Sai Kung East Country Park. The second section of MacLehose Trail, a popular hiking trail of Hong Kong, passes through the Area. Most of the natural landscape is largely undisturbed, and the important landscape resources include woodland on steep rolling slopes, streams, low-lying abandoned agricultural land, mudflats, sandy/rocky shore with cliff, estuarine areas with mangroves/backshore vegetation, and some feature trees with high amenity value in the village and near the Holy Family Chapel.

3.2 Environment and Conservation Considerations (Figure 9)

- 3.2.1 Surrounded by the Sai Kung East Country Park on three sides and comprising mainly woodlands, shrublands, grasslands, streams, sandy/rocky shore with cliff, backshore vegetation and mangroves, the Area forms part of the wider natural environment of the Country Park.
- 3.2.2 The woodland is ecologically-linked to the natural habitats in the Country Park and supports protected plant species. Uncommon plant species have also

been found in the Area. The intertidal mudflat supporting various species of mangroves and a high diversity of mangrove fauna can be found straddling the edge of the Area and the sea. Backshore vegetation largely extends from the intertidal mudflat southward to the MacLehose Trail and westward along the coast, forming a transition between the mangroves and the woodland.

- 3.2.3 Fronting onto the sea bay with the village situated in its central part and two natural streams flowing through the valleys, the Area forms a continuous scenic belt at the Chek Keng Hau along the MacLehose Trail. In general, the Area is natural and rural in character and has high landscape and scenic value.

3.3 Development Constraints (Figure 10)

Ecological Significance

- 3.3.1 Surrounded by the Sai Kung East Country Park on three sides and comprising mainly woodlands, shrublands, grasslands, streams, sandy/rocky shore with cliff, backshore vegetation and mangroves, the Area forms part of the wider natural environment of the Country Park. The woodland is ecologically-linked to the natural habitats in the Country Park and supports protected plant species, such as *Aquilaria sinensis* (土沉香) and *Cibotium barometz* (金毛狗). Uncommon plant species such as *Zanthoxylum ailanthoides* (椿葉花椒) and *Zoysia sinica* (中華結縷草) have also been found in the Area.

- 3.3.2 The intertidal mudflat straddling the edge of the Area and the sea supports seven species of mangroves including the uncommon *Heritiera littoralis* (銀葉樹) and a high diversity of mangrove fauna. Backshore vegetation largely extends from the intertidal mudflat southward to the MacLehose Trail and westward along the coast, forming a transition between the mangroves and the woodland. Dominant flora species include the *Paliurus ramosissimus* (馬甲子), *Hibiscus tiliaceus* (黃槿) and *Cerbera manghas* (海杧果). The backshore vegetation areas are ecologically linked with mangroves and provide habitats for the Sesarmine Crabs.
- 3.3.3 The two natural streams in the eastern and western parts of the Area flow through the valleys from south to north into the sea. There is neither *fung shui* woodland nor Ecologically Important Stream (EIS) in the Area, and the terrestrial habitats consist largely of common native plant species.
- 3.3.4 Furthermore, bat species *Hipposideros armiger* (大蹄蝠) and *H. pomona* (小蹄蝠), which are very common in Hong Kong, have been recorded to roost in the abandoned village houses in the Area during certain periods of the year.
- 3.3.5 From the nature conservation perspective, developments that may adversely affect the natural character and the ecologically sensitive areas will

not be recommended.

Landscape Character

- 3.3.6 With reference to the ‘Landscape Value Mapping of Hong Kong (2005)’, the Area is characterized as settled valley landscape of high landscape and scenic value complementing the overall naturalness and landscape beauty of the surrounding Sai Kung East Country Park. The second section of MacLehose Trail, a popular hiking trail of Hong Kong, passes through the Area. Most of the natural landscape is largely undisturbed, and the important landscape resources include woodland on steep rolling slopes, streams, low-lying abandoned agricultural land, mudflats, sandy/rocky shore with cliff, estuarine areas with mangroves/backshore vegetation, and some feature trees with high amenity value in the village and near the Holy Family Chapel.
- 3.3.7 From the landscape planning perspective, any large scale development with associated utilities installation and slope formation work is not compatible with the existing landscape context. Furthermore, sufficient landscape buffer should be provided to significant landscape resources in the Area.

Cultural Heritage

- 3.3.8 The Holy Family Chapel (聖家小堂) is a Grade 2 historic building worthy of preservation. Prior consultation with the Antiquities and Monuments

Office of the Leisure and Cultural Services Department should be made if any development, redevelopment or rezoning proposals might affect the above graded historic building and its immediate environs.

Burial Grounds

- 3.3.9 A large piece of permitted burial ground for indigenous villagers is located on the hillslopes along the northeastern fringe of the Area. Whilst the majority of the burial ground lies outside the Area and within the Country Park, its western part lies within the Area and is not suitable for any development.

Transportation

- 3.3.10 The Area is not served by any vehicular access and is only accessible by walking trails, including the popular MacLehose Trail which connects it with Pak Tam Road to the west, and Tai Long Wan, High Island Reservoir and Pak Tam Chung to its east and south. Part of the MacLehose Trail is within the Area. It is a popular hiking trail and should be maintained for free public access and preserved from developments in the future. There are two small piers near the village and another pier to the northeast of the Area. The Area is also accessible by boats from the nearby Wong Shek, or from the more distant Ma Liu Shui, Tai Po.

Sewerage

- 3.3.11 There is no existing or planned public sewer for the Area. Any increase in population or number of visitors to the Area or further recreation/residential developments will require additional facilities.

Other Infrastructure and Utility Services

- 3.3.12 The Area is provided with electricity and telephone services. Potable water supply has been provided to the existing facilities and village houses in the Area. However, there is no existing or planned drainage system in the Area.

Geotechnical

- 3.3.13 The Area is located below steep natural terrain with a long history of instability and may be affected by potential natural terrain landslide hazards. For developments within the Area, natural terrain hazard studies may be required to ascertain the scale of the hazards and to provide suitable hazard mitigation measures, if found necessary, as part of the developments.

3.4 Development Opportunities (Figures 8 and 9)

Conservation and Natural Landscape

- 3.4.1 Surrounded by the Sai Kung East Country Park on three sides and comprising mainly woodlands, shrublands, grasslands, streams, sandy/rocky shore

with cliff, backshore vegetation and mangroves, the Area forms part of the wider natural environment of the Country Park. The woodland is ecologically-linked to the natural habitats in the Country Park and supports protected plant species. Uncommon plant species have also been found in the Area. The intertidal mudflat supporting various species of mangroves and a high diversity of mangrove fauna can be found straddling the edge of the Area and the sea. Backshore vegetation largely extends from the intertidal mudflat southward to the MacLehose Trail and westward along the coast, forming a transition between the mangroves and the woodland. Fronting onto the sea bay with the village situated in its central part and two natural streams flowing through the valleys, the Area forms a continuous scenic belt at the Chek Keng Hau along the MacLehose Trail.

- 3.4.2 In general, the Area is natural and rural in character, has high landscape and scenic value. It is worthy of conservation while the scale of the village development should be compatible with the surrounding landscape and rural setting.

Tourism, Recreation and Agriculture Potential

- 3.4.3 The popular MacLehose Trail traverses the Area, connecting it with Pak Tam Road to the west, and Tai Long Wan, High Island Reservoir and Pak Tam Chung to its east and south. There are a variety of recreational facilities in the nearby Sai Kung East and West Country Parks, including a network of hiking trails, 13 camp sites, 36 barbecue sites

(including the Pak Tam Chung Barbecue Site for the Disabled) and the Pak Tam Chung Visitor Centre. The Bradbury Hall Youth Hostel is in close proximity to the northeast of the Area and the Jockey Club Wong Shek Water Sports Centre is located near Wong Shek Pier, which is accessible by boats from Chek Keng (**Figure 8**). There is little agricultural activity in the Area. Although the extensive abandoned farmland in the Area should possess potential for agricultural activities, as most of these areas have already been turned into shrubland or woodland after being abandoned for decades, clearance of vegetation will be required to return the land for agricultural activities.

- 3.4.4 The section of the MacLehose Trail passing through the Area should be maintained for free public access and preserved from development in the future.

3.5 Development Pressure

- 3.5.1 Due to its ecological, landscape and scenic value with access by walking trails and boats, there is an urgent need to better protect the natural and landscape character of the Area from uncontrolled development.
- 3.5.2 Chek Keng Village is the only recognized village within the Area. According to the LandsD, there are 20 outstanding Small House applications in the Area, and the 10-year Small House demand forecast provided by the Indigenous Inhabitant Representative (IIR) of Chek Keng is 254.

- 3.5.3 Suspected illegal incense tree felling on Government Land was detected during a recent site visit in September 2014 (**Figure 11**).

3.6 Development Proposals Received in the Course of Preparation of the Plan

- 3.6.1 As at November 2014, since the gazettal of the draft DPA Plan on 4.5.2012, no planning application in the Area has been received by the Board.

Submission from Kadoorie Farm & Botanic Garden Corporation

- 3.6.2 On 7.10.2014, Kadoorie Farm & Botanic Garden Corporation (KFBG) made a submission to the Planning Department (PlanD) which includes a report on “Ecological and Conservation Importance of Six Sai Kung Country Park Enclaves” and land use proposal for the Area.
- 3.6.3 According to KFBG’s submission, the woodlands, watercourses and riparian zones, the mangroves and backshore vegetation, and the riparian grasslands in the Chek Keng study area² are of high conservation importance and should be covered by an appropriate land use zoning such as the “Conservation Area” (“CA”) zone under the planning system. No development incompatible with surrounding areas or the natural heritage of these areas should be

authorized. From the ecological and nature conservation perspectives, due to the strong ecological and functional linkages, the Chek Keng Country Park Enclave is very much part of the Country Park system, and thus the Government should consider incorporating it, or areas of high conservation importance therein, into the Sai Kung Country Park.

Submission from IIR of Chek Keng Village

- 3.6.4 On 13.11.2014, the IIR of Chek Keng Village submitted a preliminary land use proposal to PlanD. He considers that the area of the “V” zone in the DPA Plan is insufficient to meet the Small House demand and proposes to expand the “V” zone to the east and west along the two natural streams. Other preliminary land use proposals mainly include: (i) three clusters of village hotels in the proposed “V” zone; (ii) the proposed “G/IC” zone on both sides of the eastern stream for a tourism facility for the seniors and disabled and a university specialized in environmental protection and organic farming; (iii) the proposed “Agriculture” zone along the eastern side of the eastern stream; (iv) the proposed “Recreation” zone in the western part of the Area for holiday resorts; (v) the proposed “Conservation Area” zone for the Holy Family Chapel and its immediate environs; (vi) two strips of 10m-wide “Coastal Protection Area” zone near the two small piers along the coast; (vii) 10m-wide buffer zone on both sides of the two natural streams; and (viii) a central sewage treatment system for the Area. The

² This also covers the area 50m from the boundary of the Country Park Enclave.

IIR indicates that he would submit a detailed report including development proposals as well as tree and ecological appraisals in due course.

4 PLANNING PROPOSALS

4.1 The Outline Zoning Plan

The draft Chek Keng OZP (the Plan) prepared under section 3(1) of the Ordinance is to provide a statutory basis for planning control over the Area. It will supersede the approved Chek Keng DPA Plan No. DPA/NE-CK/2, which was exhibited for public inspection under section 9(5) of the Ordinance on 10.5.2013. Uses and development that are always permitted and those for which the Board's permission must be sought in various zones are set out in a schedule of Notes attached to the Plan. Also accompanying the Plan is an Explanatory Statement to assist an understanding of the Plan and to reflect the planning intentions and objectives of the Board for various land-use zonings.

4.2 Planning Objectives

The development of the Area should gear towards the following objectives:

- (a) to provide a comprehensive planning framework to guide the development on an integrated and co-ordinated basis;
- (b) to conserve high natural landscape and ecological

significance of the Area in safeguarding the natural habitat and natural system of the wider area; and

- (c) to preserve the natural and rural character of the Area.

4.3 Planning Principles

The main planning principles below are adopted for preparation of the planning and development proposals of the Area:

- (a) The Area is surrounded by the Sai Kung East Country Park except where it fronts onto Chek Keng Hau in the north, forming part of the wider natural environment of the Country Park. The Area is mainly covered by woodland, which is ecologically-linked to the natural habitats in the Country Park and supports protected plant species. Uncommon plant species have also been found in the Area. The intertidal mudflat supporting various species of mangroves and a high diversity of mangrove fauna can be found straddling the edge of the Area and the sea. Backshore vegetation largely extends from the intertidal mudflat southward to the MacLehose Trail and westward along the coast, forming a transition between the mangroves and the woodland. Fronting onto the sea bay with the village situated in its central part and two natural streams flowing through the valleys, the Area forms a continuous scenic belt at the Chek Keng Hau along the MacLehose Trail. In general, the Area is natural and rural in character and has high landscape and scenic value. The natural environment and landscape and the rural setting should be preserved and protected.

- (b) Small House development in the recognized village will be concentrated at suitable locations so as to preserve the rural character of the Area. Future development and redevelopment should also demonstrate such a low-rise characteristic and not to overtax the limited infrastructure.

4.4 Land Use Proposals (Figure 12)

4.4.1 In the designation of various land use zones in the Area, consideration has been given to the natural environment, physical landform, existing land use pattern, demand for Small Houses and availability of infrastructure. The following land use zones are proposed to be designated on the Plan.

4.4.2 Village Type Development (“V”) (about 2.24 ha or 6.45%)

- (a) The planning intention of this zone is to designate both the existing recognized village and areas of land considered suitable for village expansion. Land within this zone is primarily intended for development of Small Houses by indigenous villagers. It is also intended to concentrate village type development within this zone for a more orderly development pattern, efficient use of land and provision of infrastructures and services. Selected commercial and community uses serving the needs of the villagers and in support of the village development are always permitted on the

ground floor of a New Territories Exempted House. Other commercial, community and recreational uses may be permitted on application to the Board.

- (b) Chek Keng is the only recognized village within the Area. The boundaries of the “V” zone are drawn up having regard to the village ‘environs’ (‘VE’), the number of outstanding Small House application, Small House demand forecast, local topography and site constraints. Areas of difficult terrain, dense vegetation, stream courses and burial grounds have been avoided as far as possible.
- (c) According to DLO/TP, there are 20 outstanding Small House applications in the Area, and the 10-year Small House demand forecast provided by the IIR of the Chek Keng Village is 254. Based on PlanD's preliminary estimate, land required for meeting the Small House demand of 274 is about 6.85 ha (**Table 1**).
- (d) With reference to the Small House demand and ‘VE’ for the recognized village of Chek Keng, PlanD has analyzed the site conditions of the area within ‘VE’ taking into account of the existing village settlement, previously approved Small House application³, environmental

³ DLO/TP has advised that there was a Small House application approved in 2008 (see Figure 10), and since then, there has not been any other approval. The draft Chek Keng DPA Plan was first gazetted on 4.5.2012.

conditions, natural terrain and topography. The whole 'VE' of Chek Keng Village has an area of 8.2 ha and its majority with an area of 7.49 ha is included in the boundary of the draft OZP. The existing village cluster is situated in the central part of the 'VE' (**Figure 10**), with a few houses scattered along the coast. Most of the houses are concentrated on the southern side of the MacLehose Trail on platforms formed on hill slope. The village houses are mostly abandoned with many in dilapidated condition or become ruins. Some of the land in the village has been overgrown with dense vegetation. Apart from the existing village cluster, the land within the 'VE' mainly comprises woodland to the south of MacLehose Trail and backshore vegetation to its north. A vegetated knoll protruding into the sea bay dominates its eastern part. Hilly natural terrain occupies its southern half with part of it falling within the Sai Kung East Country Park. Its western part mainly covers abandoned agricultural land overgrown with trees, shrubs and grass with gentler topography, as well as a natural stream.

- (e) Throughout the plan-making process, concerned departments and the IIR have been closely liaised to ensure that their inputs and comments are duly taken into account in the delineation of the 'V' zone for the existing village cluster and potential areas for village expansion.
- (f) Given the natural environment, its ecological

and landscape value coupled with its limited accessibility due to lack of vehicular access, an incremental approach for designation of "V" zone for Small House development has been adopted with an aim to confining Small House development at suitable locations so as to avoid undesirable disturbances to the natural environment and overtaking the limited infrastructure in the Area. Discounting the surrounding environmentally sensitive areas, including coastal area, woodland and streams which should be protected, a total of about 2.24 ha of land mainly covering the existing village cluster and its adjoining areas has been reserved for Small House development. Within the proposed "V" zone, about 1.04 ha of land is available capable of meeting about 15.2% (41 houses) of the total Small House demand for 274 houses (**Table 1**). Notwithstanding the above, planning application provides another measure for the villagers to apply for Small House development outside "V" zone subject to the Board's approval.

- (g) No new development, or addition, alteration and/or modification to or redevelopment of an existing building shall result in a total development and/or redevelopment in excess of a maximum building height of 3 storeys (8.23m) or the height of the building which was in existence on the date of the first publication in the Gazette of the notice of the draft DPA plan, whichever is the greater. Application for minor

relaxation of these restrictions would be considered by the Board based on individual merits, taking into account site constraints, innovative architectural design and planning merits that would enhance the amenity of the locality.

- (h) As diversion of streams or filling of pond may cause adverse drainage impacts on the adjacent areas and adverse impacts on the natural environment, permission from the Board is required for such activities except public works co-ordinated or implemented by Government, and maintenance, repair or rebuilding works.
- (i) There is no existing or planned public sewer for the Area. In accordance with the Environment, Transport and Works Bureau's Technical Circular (Works) No. 5/2005, under the current administrative practice, development proposals/submissions that may affect natural streams/rivers, the approving/processing authorities at various stages of the development should consult and collate comments from the Agriculture, Fisheries and Conservation Department (AFCD) and relevant authorities and incorporate relevant comments/advice as conditions of approval wherever possible. Accordingly, LandsD, when processing Small House grant and applications in close proximity to existing stream courses, should consult concerned departments including AFCD, Environmental Protection Department (EPD)

and PlanD to ensure that all relevant departments would have adequate opportunity to review and comment on the applications.

- (j) The "V" zone in the Area is located below steep natural terrain with a long history of instability and may be affected by potential natural terrain landslide hazards. For development within the Area, the developer(s) may be required to carry out natural terrain hazard study and to provide suitable hazard mitigation measures, if found necessary, as part of the development.
- (k) There is no existing or planned public sewer for the Area. For Small House development, the design and construction of the septic tank and soakaway systems need to comply with relevant standards and regulations, such as EPD's Practice Note for Professional Persons (ProPECC PN) 5/93 – "Drainage Plans subject to Comment by the Environmental Protection Department", for the protection of the water quality of the Area.

4.4.3 Government, Institution or Community ("G/IC") (0.08 ha or 0.23%)

- (a) The planning intention of this zone is 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.

- (b) The major existing GIC facilities under this zone include a public toilet and a refuse collection point along MacLehose Trail in the eastern part of the Area, as well as the Holy Family Chapel at the southern fringe of Chek Keng Village.
- (c) To preserve the rural and low-rise character of the Area as well as provide spatial and visual relief, development/redevelopment within this zone should be restricted to a maximum building height as stipulated on the Plan (i.e. one storey) or the height of the building which was in existence on the date of the first publication in the Gazette of the notice of the draft DPA plan, whichever is greater.
- (d) 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 application will be considered on its individual planning merits.

4.4.4 Green Belt (“GB”) (28.82 ha or 82.96%)

- (a) 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.

- (b) The “GB” zone comprising mainly woodlands, shrublands, grasslands and streams, can provide a buffer between the village type developments and the Sai Kung East Country Park and conserve the natural and rural character of the Area.
- (c) The “GB” zone also comprises the western part of the permitted burial ground on the hillslopes along the northeastern fringe of the Area. It has been in existence for many years, and is considered as existing use intended for the burial of deceased indigenous villagers in the Area. To respect the local ritual and tradition, burial activities within this zone are generally tolerated.
- (d) There is a general presumption against development within this zone. Development in this zone will be strictly controlled. Development proposals will be considered by the Board on individual merits taking into account the relevant Town Planning Board Guidelines.
- (e) As diversion of streams, filling of land/pond or excavation of land may cause adverse drainage

impacts on the adjacent areas and adverse impacts on the natural environment, permission from the Board is required for such activities except public works co-ordinated or implemented by Government, and maintenance, repair or rebuilding works.

4.4.5 Coastal Protection Area (“CPA”): (3.60 ha or 10.36%)

- (a) This zone is intended to conserve, protect and retain the natural coastlines and the sensitive coastal natural environment, including attractive geological features, physical landform or area of high landscape, scenic or ecological value, with a minimum of built development. It may also cover areas which serve as natural protection areas sheltering nearby developments against the effects of coastal erosion. There is a general presumption against development in this zone. In general, only developments that are needed to support the conservation of the existing natural landscape or scenic quality of the area or are essential infrastructure projects with overriding public interest may be permitted.

- (b) This zone mainly covers the coastal area along Chek Keng Hau to the north of MacLehose Trail (with the exception of a few houses and ruins at the village cluster) and the cliff of the vegetated knoll to the south of the trail. It primarily consists of sandy/rocky shore with cliff, backshore vegetation, mangroves and stream

estuaries. The intertidal mudflat straddling the edge of the Area and the sea supports seven species of mangroves including the uncommon *Heritiera littoralis* (銀葉樹) and a high diversity of mangrove fauna. Backshore vegetation is ecologically linked with mangroves and provides habitats for Sesarmine Crabs.

- (c) New residential development is not permitted under this zone. Redevelopment of existing houses may be permitted on application to the Board. The redevelopment of existing houses shall not result in a total redevelopment in excess of the plot ratio, site coverage and height of the house which was in existence on the date of the first publication of the draft DPA Plan.
- (d) Diversion of streams, filling of land/pond or excavation of land may cause adverse drainage impacts on adjacent areas and adverse impacts on the natural environment. In view of the conservation value of the area within this zone, permission from the Board is required for such activities.

5 **IMPLEMENTATION**

Infrastructural Provisions

- 5.1 The Area is provided with electricity and telephone services. Potable water supply has been provided to the existing facilities and village houses in the Area. There are no

existing and planned drainage and sewerage systems.

Statutory Development Control

- 5.2 The Plan provides a broad land-use framework for development control and implementation of planning proposals for the Area. More detailed plans will be prepared as a basis for public works planning and private developments.
- 5.3 At present, there is no overall programme for the provision of infrastructure within the Area. The implementation process will be gradual and may stretch over a long period of time depending on the availability of resources. It will be undertaken through the participation of both public and private sectors.
- 5.4 Notwithstanding the above, minor improvement works, e.g. access improvement and laying of utility services will be implemented through the Public Works Programme as and when resources are available. Private developments will be effected principally through private sector initiatives to develop or redevelop their properties in accordance with the zoned uses indicated on the Plan, provided that their proposals meet Government requirements.
- 5.5 The types of permitted developments and uses on land within the Area are listed in the Notes of the Plan. Unless otherwise specified, all building, engineering and other operations incidental to and all uses directly related and ancillary to the permitted developments and uses within the same zone are always permitted. Any development, other than those referred to in this paragraph above or in

conformity with this Plan or with the permission of the Board, undertaken or continued on land included in this Plan on or after the date of the first publication in the Gazette of the Notice of the draft DPA Plan may be subject to enforcement proceedings under the Ordinance. Any diversion of streams, filling of land/pond and excavation of land in the relevant zones on or after the date of the first publication in the Gazette of the Notice of the draft DPA Plan without permission from the Board may also be subject to enforcement proceedings. Moreover, there is a presumption against filling of ponds for temporary land uses/developments in conservation-related zonings, such as “CPA”.

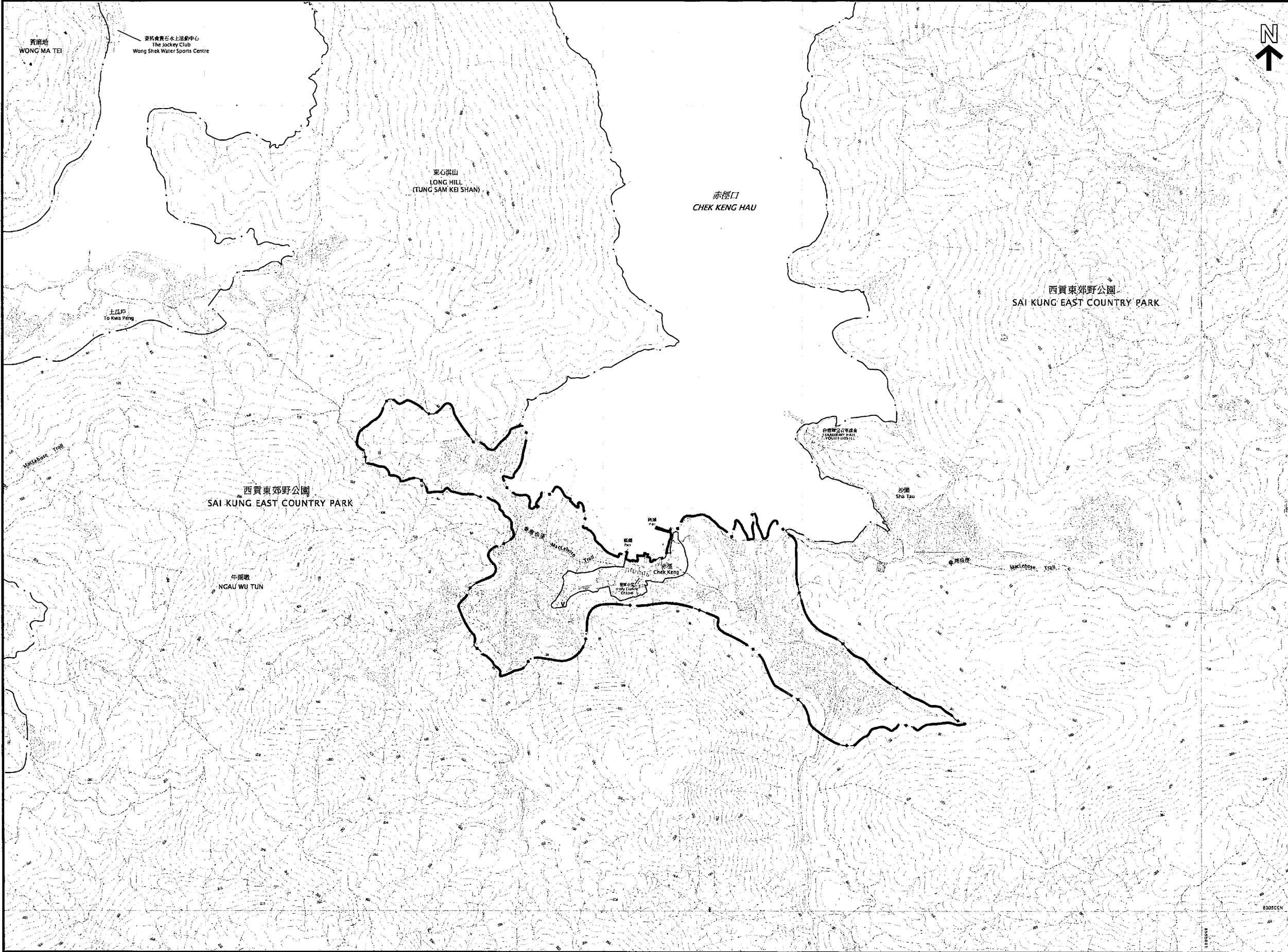
PLANNING DEPARTMENT
December 2014

Table 1: Small House Demand for Chek Keng

Village	Small House Demand Figure in 2012		Small House Demand Figure in 2014		'VE' Area (ha) ('VE' Area in OZP)	"V" Zone on Draft OZP (ha)	Required Land to Meet New Demand (ha)	Available Land to Meet New Demand (ha)	Percentage of the New Demand met by Available Land
	Outstanding Demand	10-year Forecast (2012 – 2021)	Outstanding Demand	10-year Forecast (2014 – 2023)					
Chek Keng	19	Nil*	20	254**	8.2 (7.49)	2.24	6.85	1.04	15.2%

* According to the TPB Paper No. 9068 on Consideration of the Draft Chek Keng DPA Plan No. DPA/NE-CK/C in April 2012, there were 19 outstanding Small House applications and the 10-year Small House demand forecast had not been available since 2007.

** On 14.11.2014, the DLO/TP advised that on 12.11.2014, the Indigenous Inhabitant Representative (IIR) submitted a 10-year Small House demand forecast to DLO/TP and the said forecast figure provided by IIR of Chek Keng was 254. DLO/TP further advised that the said forecast figure was not verified in any way by DLO/TP.



圖例
NOTATION

ZONES

VILLAGE TYPE DEVELOPMENT

MISCELLANEOUS

BOUNDARY OF DEVELOPMENT PERMISSION AREA

BOUNDARY OF COUNTRY PARK / SPECIAL AREA

地帶

鄉村式發展

其他

發展界址線

郊野公園 / 特別地區界線

土地用途及面積一覽表
SCHEDULE OF USES AND AREAS

USES	大約面積及百分比 APPROXIMATE AREA & %		用途
	公頃 HECTARES	% 百分比	
VILLAGE TYPE DEVELOPMENT	2.24	6.45	鄉村式發展
UNSPECIFIED USE	32.50	93.55	非指定用途
TOTAL AREA OF DEVELOPMENT PERMISSION AREA	34.74	100.00	發展界址地區總面積

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

EXTRACT PLAN PREPARED ON 10.9.2014
BASED ON DEVELOPMENT PERMISSION
AREA PLAN No. DPA/NE-CK/2 APPROVED ON 30.4.2013

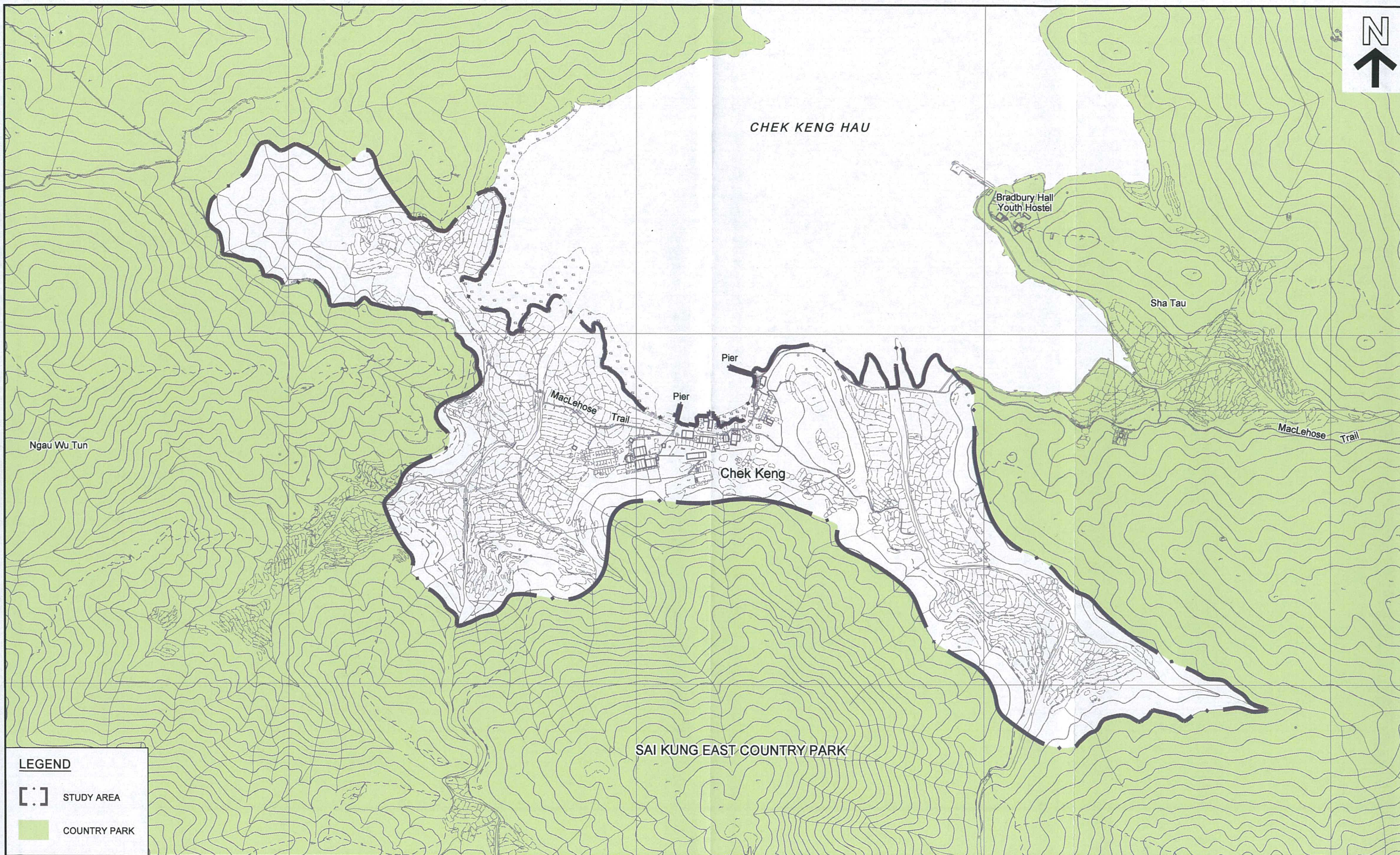
CHEK KENG
DEVELOPMENT PERMISSION AREA PLAN

METRES 250 0 250 500 METRES

PLANNING DEPARTMENT

REFERENCE No.
M/CPE/CK/14/1

FIGURE
2



LEGEND

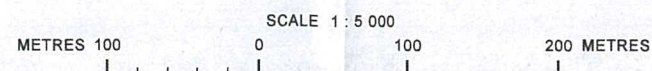
[- -] STUDY AREA

[Green] COUNTRY PARK

EXTRACT PLAN PREPARED ON 7.10.2014
 BASED ON SURVEY SHEETS No. 8-NE-16A/B/C/D,
 17A/B/C/D, 21A/B AND 22A/B

STUDY AREA

CHEK KENG



PLANNING DEPARTMENT



REFERENCE No.
 M/CPE/CK/14/1

FIGURE
 3



LEGEND



STUDY AREA

AERIAL PHOTO

CHEK KENG

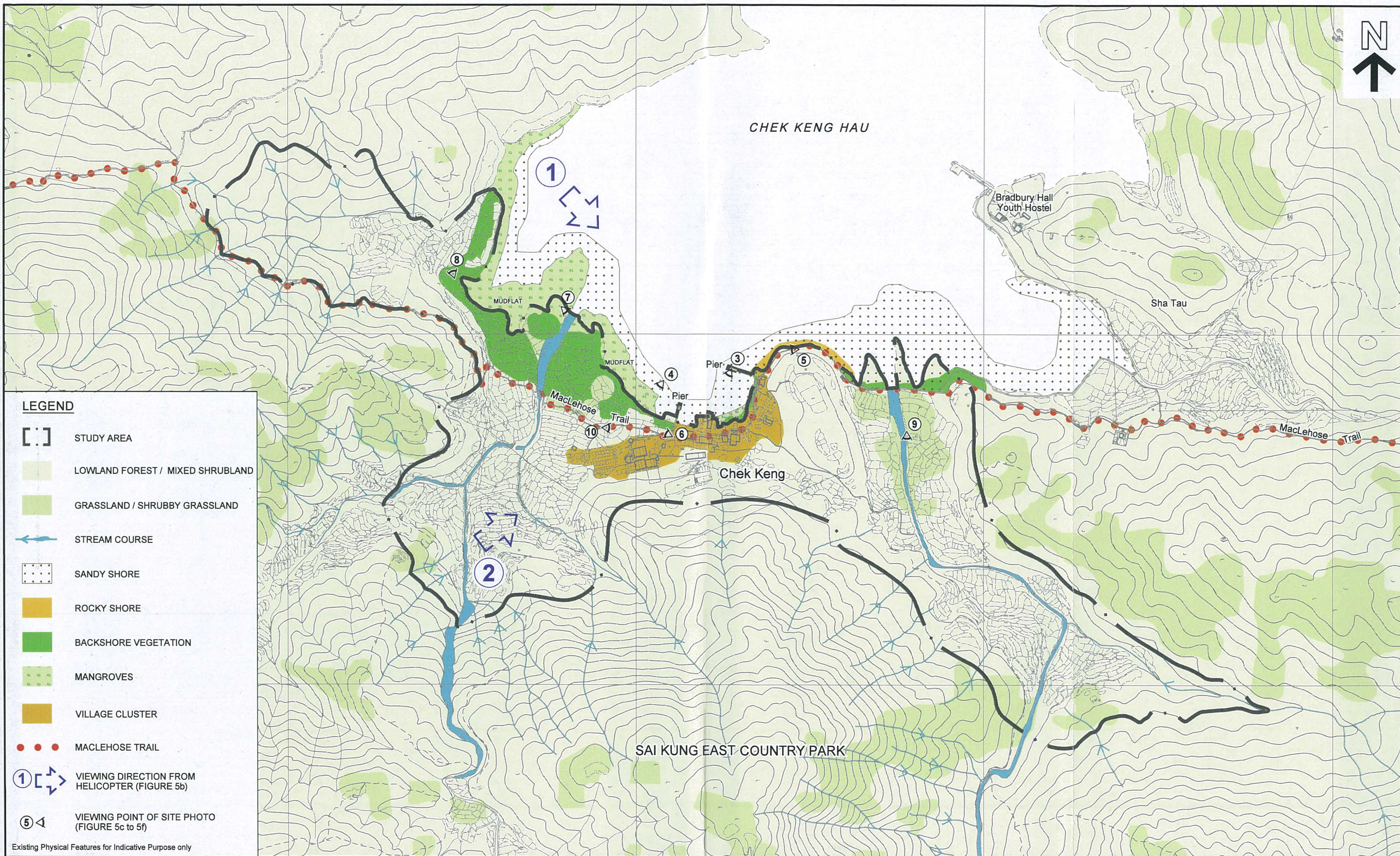
PLANNING DEPARTMENT



EXTRACT PLAN PREPARED ON 27.11.2014
BASED ON AERIAL PHOTOS No. CS49360-64
AND CS49620-24 TAKEN ON 23.3.2014
BY LANDS DEPARTMENT

REFERENCE No.
M/CPE/CK/14/1

FIGURE
4



EXISTING PHYSICAL FEATURES

CHEK KENG

SCALE 1:5 000
METRES 100 0 100 200 METRES

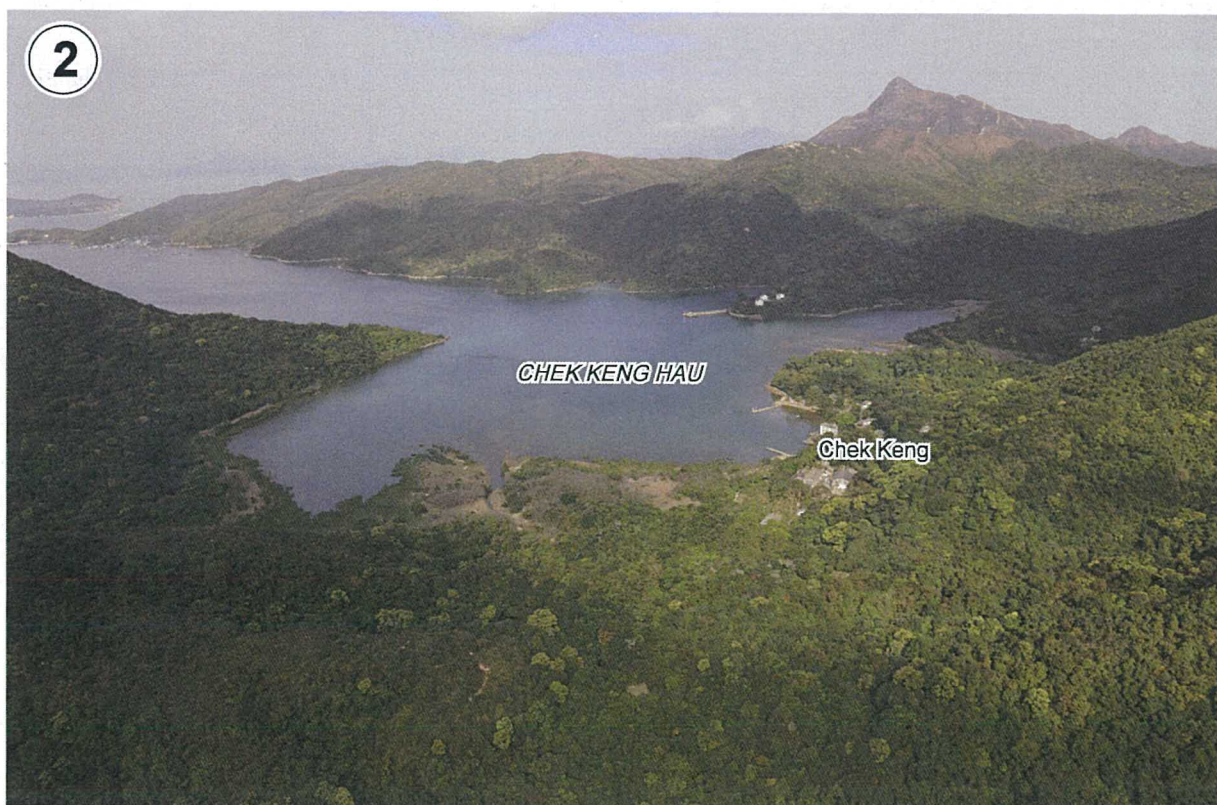
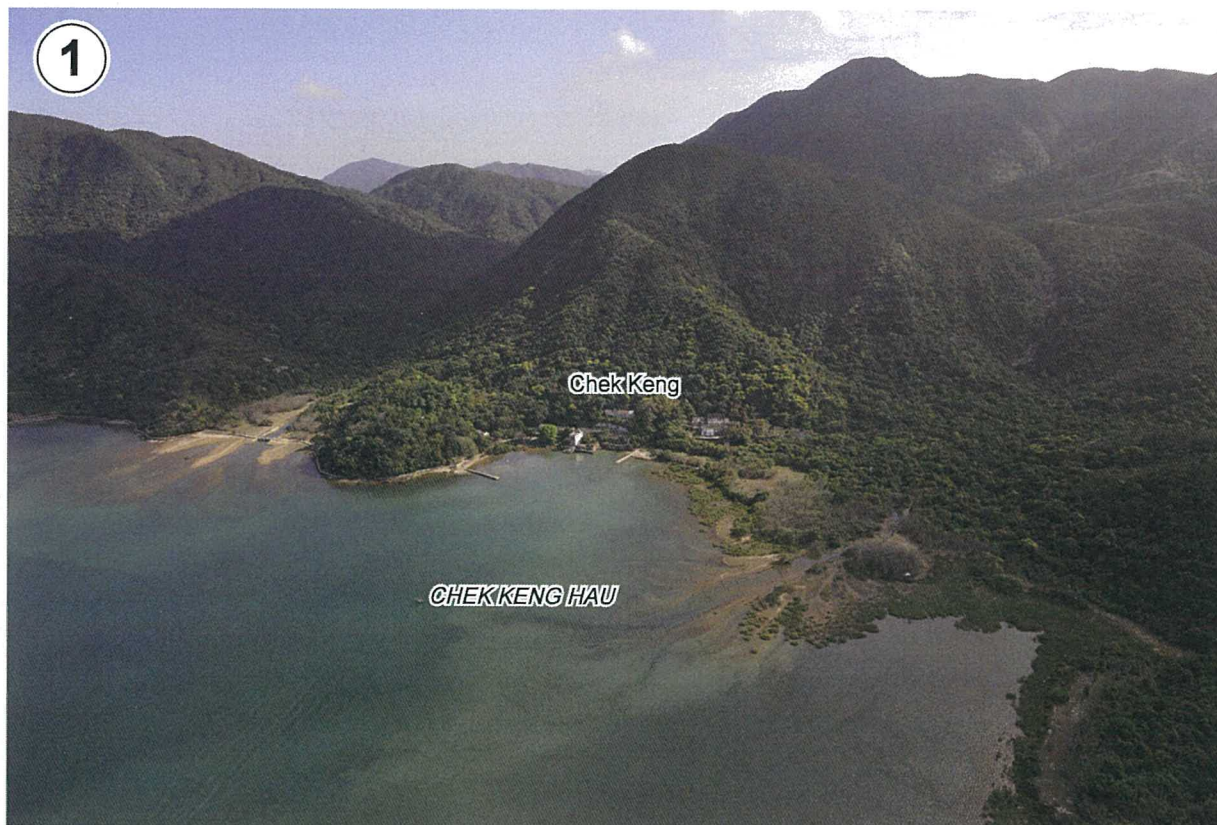
PLANNING DEPARTMENT



REFERENCE No.
M/CPE/CK/14/1

FIGURE
5a

EXTRACT PLAN PREPARED ON 16.12.2014
BASED ON SURVEY SHEETS No. 8-NE-16A/B/C/D,
17A/B/C/D, 21A/B AND 22A/B



PHOTOS 1 & 2 TAKEN FROM HELICOPTER

**SITE PHOTOS -
EXISTING PHYSICAL FEATURES**

CHEK KENG

EXTRACT PLAN PREPARED ON
25.11.2014 BASED ON SITE PHOTOS
TAKEN ON 19.10.2011

**PLANNING
DEPARTMENT**



REFERENCE No.

M/CPE/CK/14/1

FIGURE

5b



Central Part of Chek Keng



Backshore Vegetation and Mangroves

EXTRACT PLAN PREPARED ON
25.11.2014 BASED ON SITE PHOTOS
TAKEN ON 29.9.2014

SITE PHOTOS - EXISTING PHYSICAL FEATURES

CHEK KENG

PLANNING
DEPARTMENT



REFERENCE No.
M/CPE/CK/14/1

FIGURE
5c



Cliff, MacLehose Trail and Sandy / Rocky Shore



MacLehose Trail and the Coastal Area

EXTRACT PLAN PREPARED ON
25.11.2014 BASED ON SITE PHOTOS
TAKEN ON 29.9.2014

SITE PHOTOS - EXISTING PHYSICAL FEATURES

CHEK KENG

PLANNING
DEPARTMENT



REFERENCE No.
M/CPE/CK/14/1

FIGURE
5d



Estuary of Western Stream



Coastal Area at the Western End

SITE PHOTOS - EXISTING PHYSICAL FEATURES

CHEK KENG

EXTRACT PLAN PREPARED ON
25.11.2014 BASED ON SITE PHOTOS
TAKEN ON 29.9.2014

PLANNING
DEPARTMENT



REFERENCE No.
M/CPE/CK/14/1

FIGURE
5e



Eastern Stream and Adjacent Abandoned Agricultural Land



An area covered with Shrubs and Young Trees, between MacLehose Trail and Village

**SITE PHOTOS -
EXISTING PHYSICAL FEATURES**

CHEK KENG

**PLANNING
DEPARTMENT**



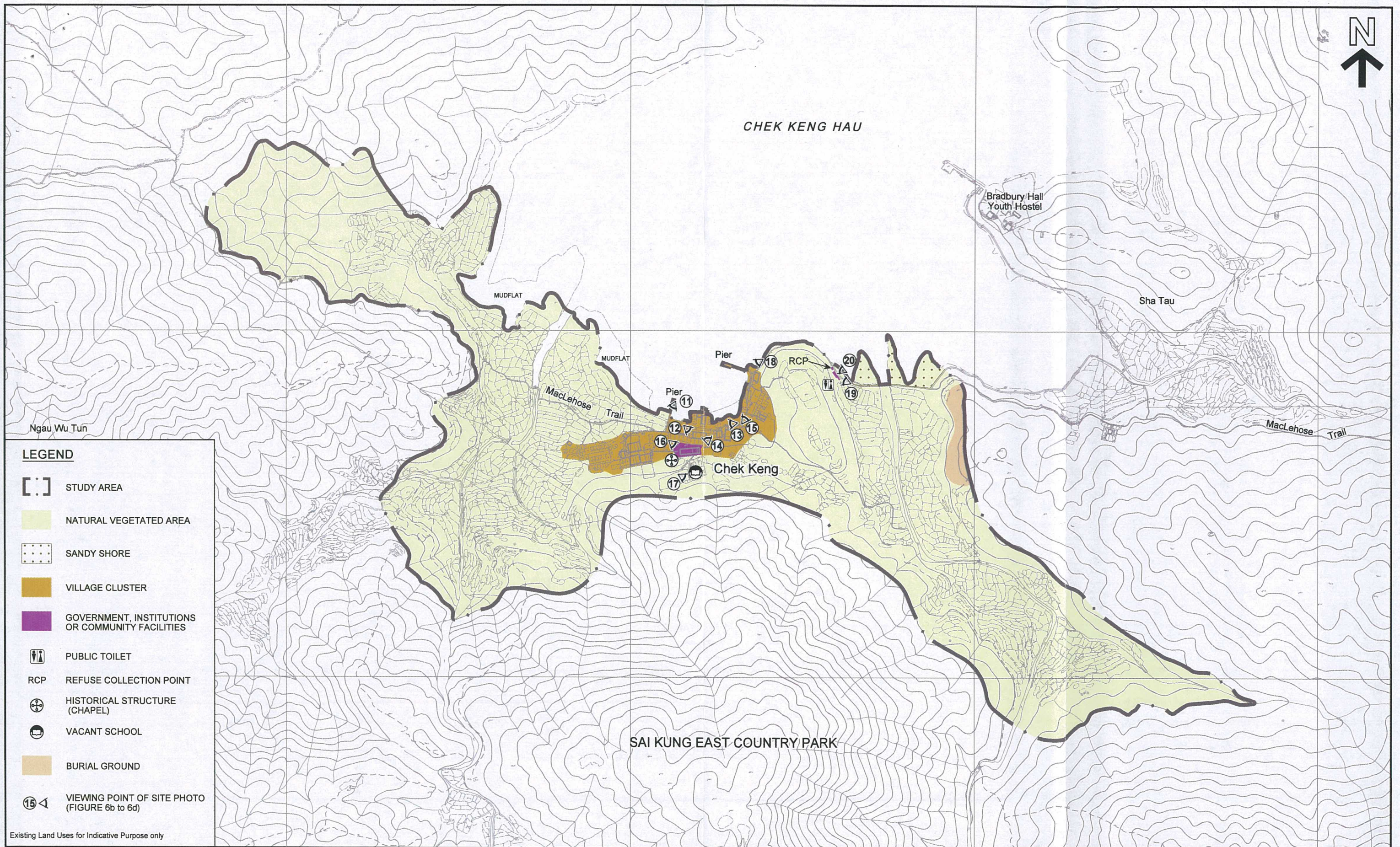
EXTRACT PLAN PREPARED ON
28.11.2014 BASED ON SITE PHOTOS
TAKEN ON 19.10.2011

REFERENCE No.

M/CPE/CK/14/1

FIGURE

5f



EXISTING LAND USES

CHEK KENG

SCALE 1 : 5 000
METRES 100 0 100 200 METRES

PLANNING DEPARTMENT



REFERENCE No.
M/CPE/CK/14/1

FIGURE
6a

EXTRACT PLAN PREPARED ON 16.12.2014
BASED ON SURVEY SHEETS No. 8-NE-16A/B/C/D,
17A/B/C/D, 21A/B AND 22A/B

11



Houses and Ruins at the Coast

12



House Ruins

13



Abandoned Village House

EXTRACT PLAN PREPARED ON
15.12.2014 BASED ON SITE PHOTOS
TAKEN ON 29.9.2014

SITE PHOTOS - EXISTING LAND USES

CHEK KENG

PLANNING
DEPARTMENT



REFERENCE No.
M/CPE/CK/14/1

FIGURE
6b



Inland House Ruins



Abandoned Platform at the Coast



Holy Family Chapel (Grade II)



Abandoned School Site

EXTRACT PLAN PREPARED ON
15.12.2014 BASED ON SITE PHOTOS
TAKEN ON 29.9.2014

SITE PHOTOS - EXISTING LAND USES

CHEK KENG

PLANNING
DEPARTMENT

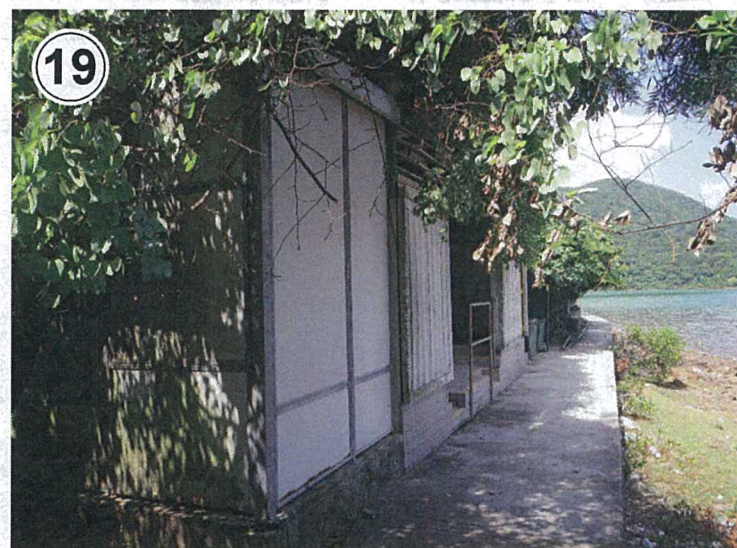


REFERENCE No.
M/CPE/CK/14/1

FIGURE
6c



Primitive Pier



Public Toilet



Refuse Collection Point

EXTRACT PLAN PREPARED ON
16.12.2014 BASED ON SITE PHOTOS
TAKEN ON 29.9.2014

SITE PHOTOS - EXISTING LAND USES

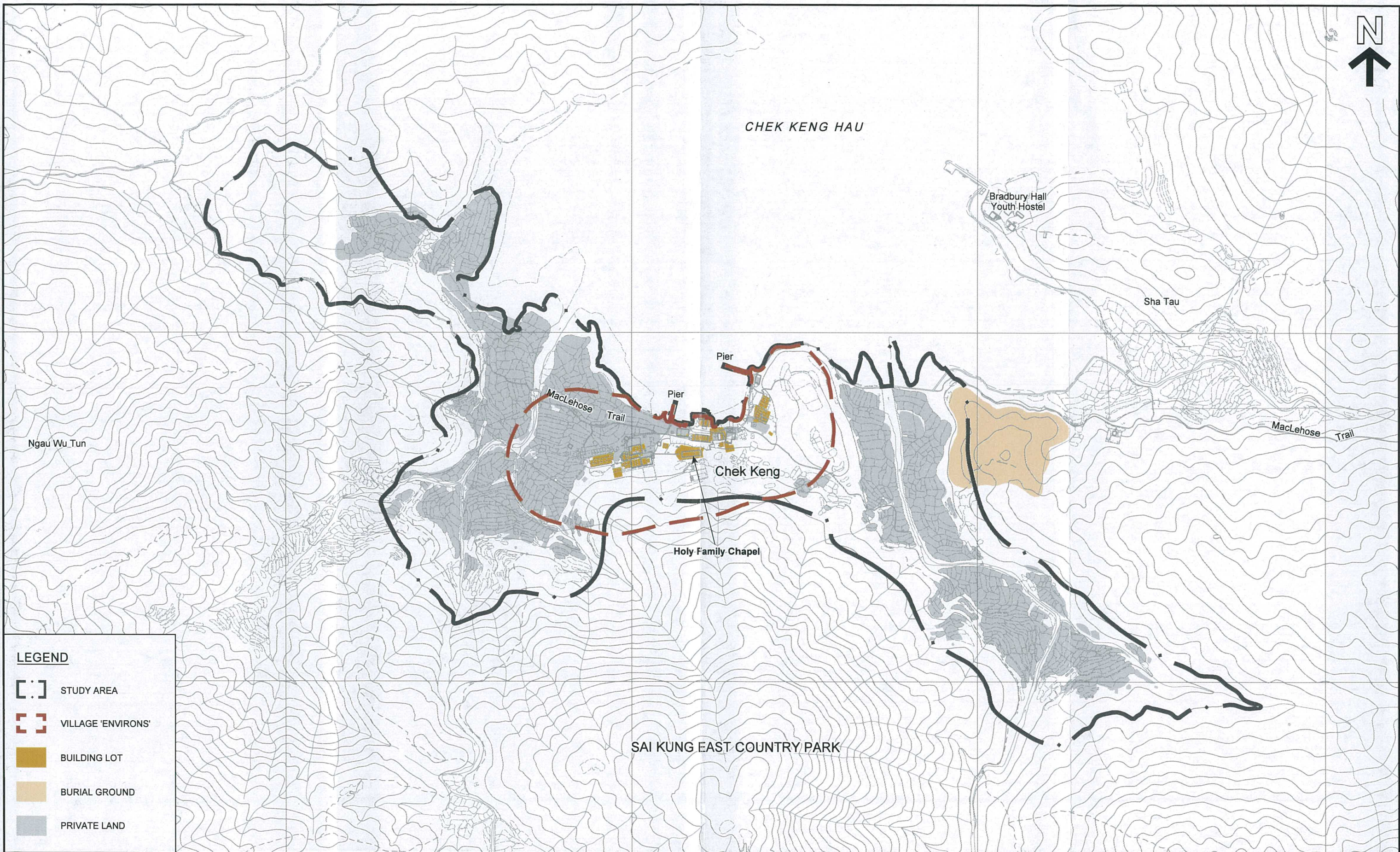
CHEK KENG

PLANNING
DEPARTMENT



REFERENCE No.
M/CPE/CK/14/1

FIGURE
6d

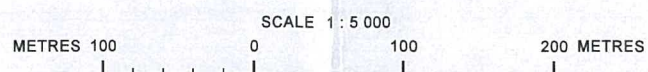


LEGEND

- STUDY AREA
- VILLAGE 'ENVIRONS'
- BUILDING LOT
- BURIAL GROUND
- PRIVATE LAND

LAND OWNERSHIP AND VILLAGE 'ENVIRONS'

CHEK KENG



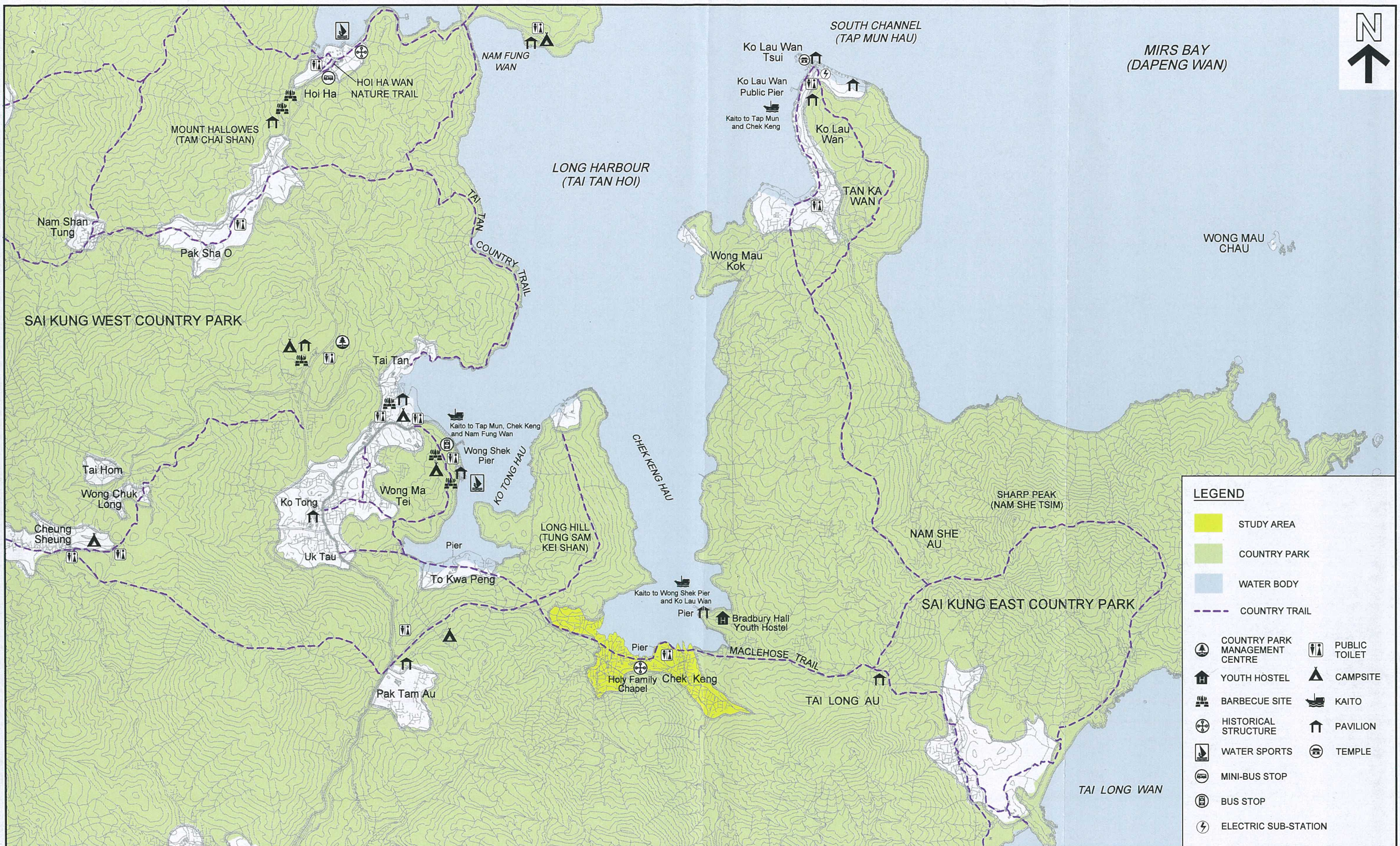
PLANNING DEPARTMENT



REFERENCE No.
M/CPE/CK/14/1

FIGURE
7

EXTRACT PLAN PREPARED ON 15.12.2014
BASED ON SURVEY SHEETS No. 8-NE-16A/B/C/D,
17A/B/C/D, 21A/B AND 22A/B



EXISTING GIC, INFRASTRUCTURAL AND TOURISM-RELATED FACILITIES

CHEK KENG

SCALE 1 : 25 000
METRES 500 0 500 1000 METRES

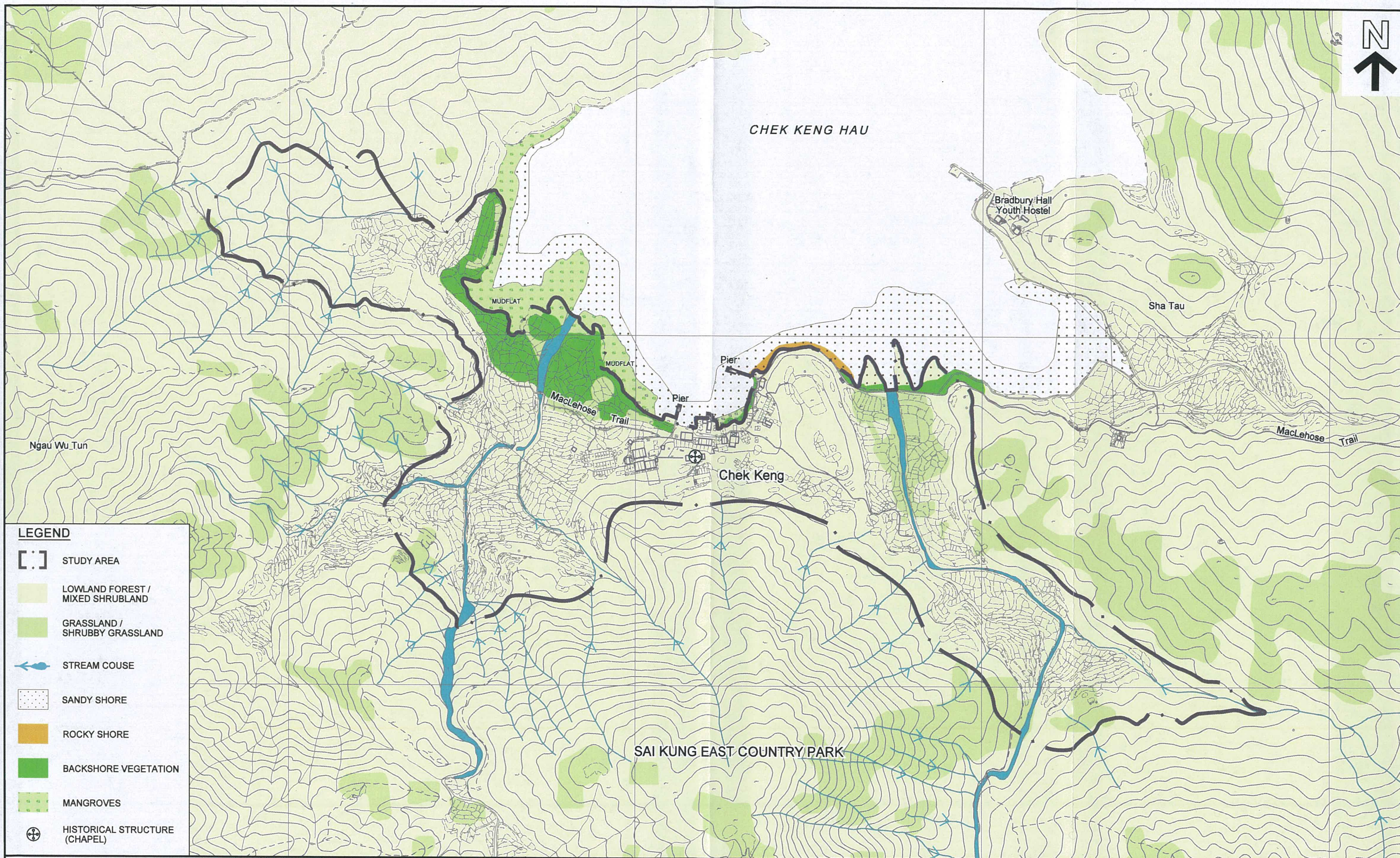
PLANNING DEPARTMENT



REFERENCE No.
M/CPE/CK/14/1

FIGURE
8

EXTRACT PLAN PREPARED ON 12.12.2014
BASED ON SURVEY SHEETS No. 4-SE/SW AND 8-NE/NW



ECOLOGICAL AND CULTURAL HERITAGE RESOURCES

CHEK KENG

EXTRACT PLAN PREPARED ON 2.12.2014
BASED ON SURVEY SHEETS No. 8-NE-16A/B/C/D,
17A/B/C/D, 21A/B AND 22A/B

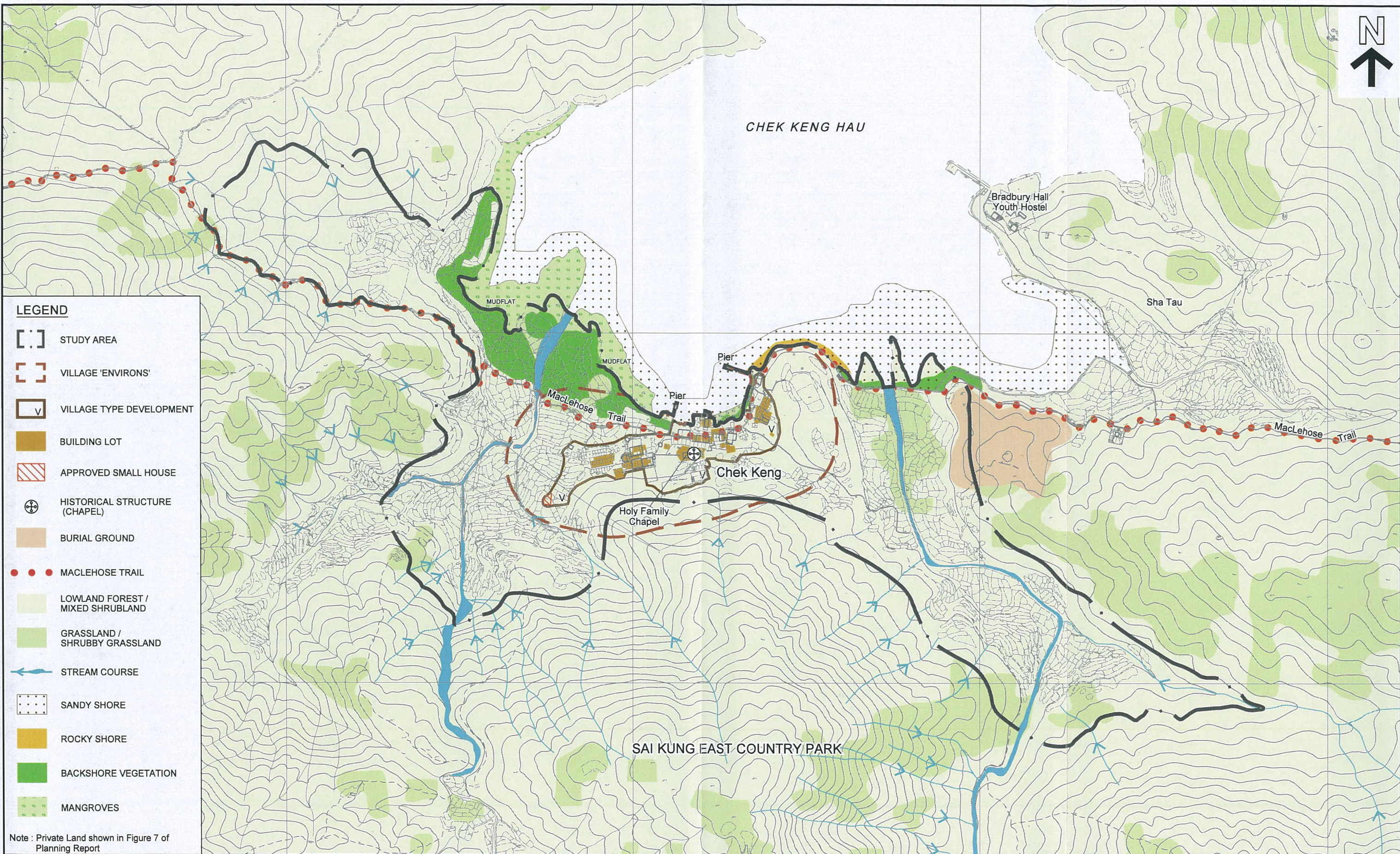
SCALE 1 : 5 000
METRES 100 0 100 200 METRES

PLANNING DEPARTMENT



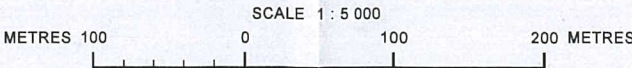
REFERENCE No.
M/CPE/CK/14/1

FIGURE
9



DEVELOPMENT CONSTRAINTS

CHEK KENG



PLANNING DEPARTMENT



REFERENCE No.
M/CPE/CK/14/1

FIGURE
10

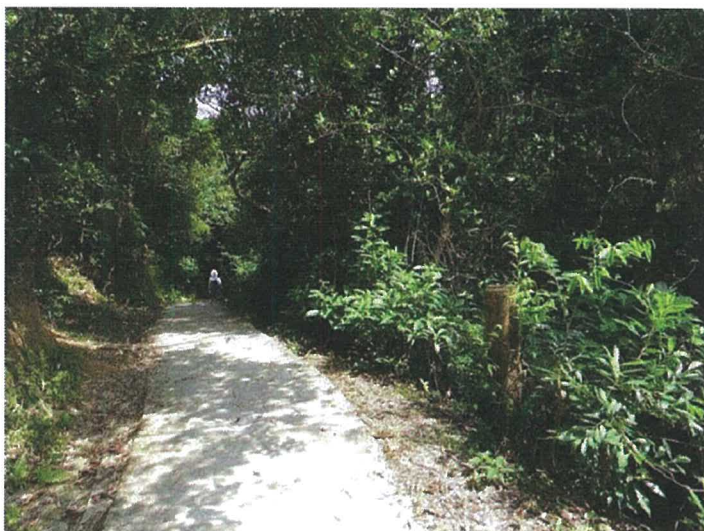
EXTRACT PLAN PREPARED ON 16.12.2014
BASED ON SURVEY SHEETS No. 8-NE-16A/B/C/D,
17A/B/C/D, 21A/B AND 22A/B



TREE 1



TREE 1



TREE 2



TREE 2

EXTRACT PLAN PREPARED ON 28.11.2014
BASE ON PHOTOS TAKEN BY AGRICULTURE
FISHERIES AND CONSERVATION DEPARTMENT

**SUSPECTED ILLEGAL INCENSE TREE FELLING
ON GOVERNMENT LAND DETECTED IN SEPTEMBER 2014**

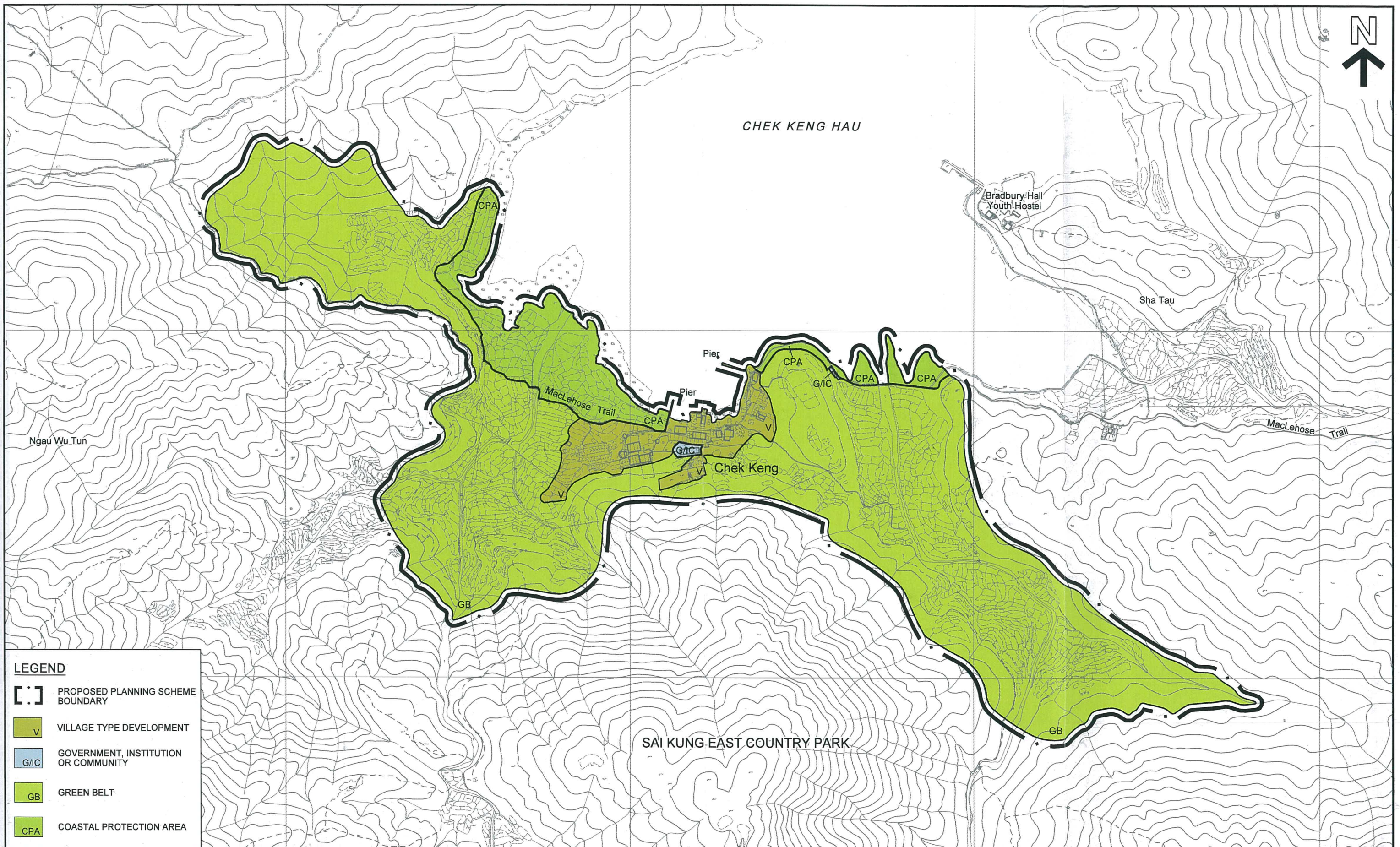
CHEK KENG

**PLANNING
DEPARTMENT**



REFERENCE No.
M/CPE/CK/14/1

**FIGURE
11**



LEGEND

[] PROPOSED PLANNING SCHEME BOUNDARY

V VILLAGE TYPE DEVELOPMENT

G/I/C GOVERNMENT, INSTITUTION OR COMMUNITY

GB GREEN BELT

CPA COASTAL PROTECTION AREA

PROPOSED LAND USES

CHEK KENG



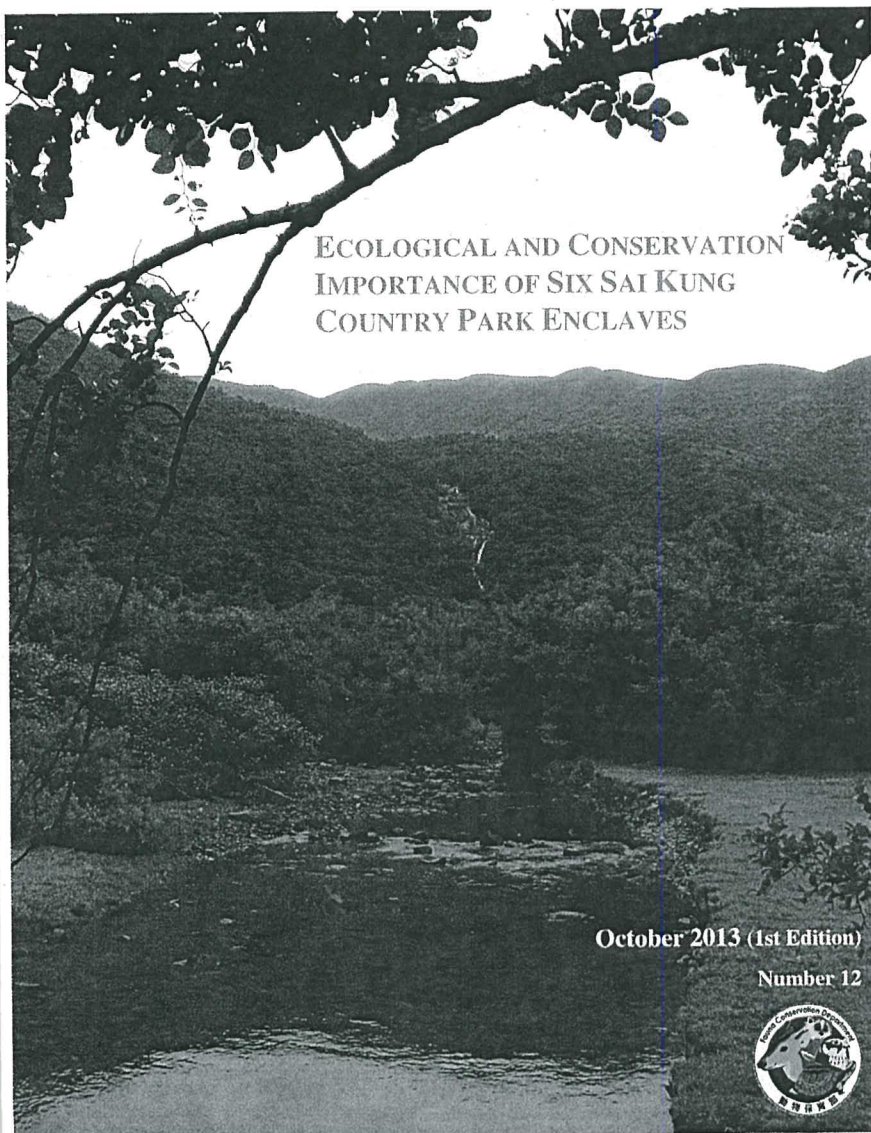
PLANNING DEPARTMENT



EXTRACT PLAN PREPARED ON 5.12.2014
BASED ON SURVEY SHEETS No. 8-NE-16A/B/C/D,
17A/B/C/D, 21A/B AND 22A/B

REFERENCE No.
M/CPE/CK/14/1

FIGURE
12



Ecological and Conservation Importance of Six Sai Kung Country Park Enclaves

(1st Edition)

October 2013

Editors

Gary ADES, Tony NIP & Ming Chuan WOO

Contents

Contents	1
Executive Summary	2
1. Background and Introduction	3
2. Methods	4
2.1 Surveys	4
2.2 Data from Other Sources	4
3. Results	5
3.1 Habitats and Vegetation	5
3.2 Plant Species of Conservation Concern	13
3.3 Amphibians and Reptiles	14
3.4 Fish	17
3.5 Crustaceans	18
3.6 Birds	18
3.7 Mammals	20
4. Habitats of High Conservation Importance	21
4.1 Watercourses and Riparian Zones	21
4.2 Woodlands	21
4.3 Mangroves and Backshore Vegetation	21
4.4 Marshes and Seasonally Wet Grasslands at PSO and PTA	21
4.5 Ponds at PTA	21
4.6 Riparian Grasslands at CK	22
4.7 Pond and Associated Marsh at KT	22
4.8 Existing Agricultural Land at PSO	22
5. Recommendation	23
References	24
Figures	26
Appendices	38
Appendix 1. Flora Species Recorded within Each Enclave	39
Appendix 2. Avian Species Recorded or Predicted to Occur in the Enclave Habitats	101

Abbreviations: PSO (Pak Sha O), PTA (Pak Tam Au), CK (Chek Keng), KT (Ko Tong)

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Cover photo: Chek Keng

Executive Summary

Following the “Tai Long Sai Wan incident” in 2010 which saw the potential loss of an area of outstanding beauty to a private development and highlighted how vulnerable our local ecology and natural heritage have become, the Hong Kong Government made a promise to step up procedures to protect the Country Park (CP) enclaves not yet covered by statutory plans. In 2011, the Ombudsman also urged relevant departments and bureaux to cover those areas with statutory plans or incorporate them into the CP system.

At the time of writing, the Planning Department has been preparing Development Permission Area plans (DPA) or Outline Zoning Plans (OZP) for many of these areas, in consultation with the Town Planning Board. Meanwhile, the Agriculture, Fisheries and Conservation Department has incorporated several enclaves (including Tai Long Sai Wan) into the CP system (revised CP maps were gazetted in May 2013 for 3 enclaves), based on the advice from the Country and Marine Parks Board. There are still approximately 28 enclaves not yet appropriately protected (at time of writing).

With a view to facilitating future decisions regarding the conservation of the CP enclaves, KFBG and collaborators have carried out site visits and surveys of several enclave areas to obtain up-to-date ecological information, which can be shared with the public and authorities. It is hoped that more informed decisions can be developed based on the additional knowledge provided in this report. The present report covers six enclaves in Sai Kung: Pak Sha O and Pak Sha O Ha Yeung, Nam Shan Tung, Pak Tam Au, Ko Tong, To Kwa Peng and Chek Keng. We hope these findings can assist the relevant Government departments in making appropriate and informed decisions regarding the designated zoning plans for these areas, and support the incorporation of unprotected areas into the CP system.

Most natural and semi-natural habitats within the listed enclaves are of high conservation concern; indeed, from an ecological and conservation viewpoint, they are inseparable from the wider Sai Kung CP ecosystem. We urge that the government takes guidance from the Convention on Biological Diversity (extended to Hong Kong in 2011) in deliberating its planning decisions for the enclaves. Appropriate conservation zonings (under the CP system or the town planning system) and statutory control of these areas will help deter haphazard, unsustainable development and help to appropriately safeguard Hong Kong's important natural and built heritage for the wider community and future generations.

1. Background and Introduction

The “Tai Long Sai Wan incident” first came under the spotlight in mid 2010 (http://www.nshk.org.hk/pdf/c_awards/2010/010.pdf); the public reacted with great concern regarding the case and urged the Government to take immediate action to safeguard natural landscapes that are afforded no statutory protection (as in the case of Tai Long Sai Wan). The then Chief Executive announced in his Policy Address (in October 2010) that the Planning Department (PlanD) and the Agriculture, Fisheries and Conservation Department (AFCD) would protect the Country Park (CP) Enclaves not yet covered by statutory plans according to the local situations, either by incorporating them into the CPs or through statutory planning control; in September 2011 the Ombudsman also recommended that (a) *DevB (Development Bureau) and EnB (Environment Bureau) should urge their executive departments to, as directed by the Chief Executive, expeditiously prepare statutory plans for those enclaves that are still unprotected or to incorporate them into country parks, in order to ensure that all enclaves are properly protected*; and (b) *AFCD should consider incorporating private lands that have conservation value into country parks in accordance with the revised CMPB (Country and Marine Parks Board) criteria* (http://www.ombudsman.hk/concluded/2011_09_02.pdf).

Also in 2011, the Convention on Biological Diversity (CBD) was extended to Hong Kong, and in the 2013 Policy Address, the Chief Executive Mr. C.Y. Leung reported that the Government would appropriately implement the requirement of this international Convention and a Biodiversity Strategy and Action Plan (BSAP) would be developed; Article 8 of this international Convention lists all necessary actions that are essential for in-situ conservation (<http://www.cbd.int/convention/articles/default.shtml?a=cbd-08>), and some relevant items are documented below:

- (a) *Establish a system of protected areas or areas where special measures need to be taken to conserve biological diversity*
- (b) *Develop, where necessary, guidelines for the selection, establishment and management of protected areas or areas where special measures need to be taken to conserve biological diversity*
- (c) *Regulate or manage biological resources important for the conservation of biological diversity whether within or outside protected areas, with a view to ensuring their conservation and sustainable use*
- (d) *Promote the protection of ecosystems, natural habitats and the maintenance of viable populations of species in natural surroundings*
- (e) *Promote environmentally sound and sustainable development in areas adjacent to protected areas with a view to furthering protection of these areas*
- (f) *Rehabilitate and restore degraded ecosystems and promote the recovery of threatened species, inter alia, through the development and implementation of plans or other management strategies*
- (i) *Endeavour to provide the conditions needed for compatibility between present uses and the conservation of biological diversity and the sustainable use of its components*
- (k) *Develop or maintain necessary legislation and/or other regulatory provisions for the protection of threatened species and populations*

The present report was compiled with the above incidents and Government promises in mind. Six CP enclaves in Sai Kung were selected for documentation, partly due to the fact that some information on these sites was already available and also because these sites were considered of ecological importance: Pak Sha O (PSO; including Pak Sha O Ha Yeung (PSOHY)), Nam Shan Tung (NST), Pak Tam Au (PTA), Ko Tong (KT; including Ko Tong Ha Yeung (KTHY)) and Tai Tan (TT), To Kwa Peng (TKP) and Chek Keng (CK) (Figure 1). The aim of this report is to provide up-to-date ecological information for relevant authorities to ensure that the CP enclaves are afforded appropriate protection. The information was gathered by experts from Kadoorie Farm & Botanic Garden (KFBG) and experts from a local ecological consultant with more than ten years' experience in ecological survey and assessment work in Hong Kong, including Sai Kung. The survey was sponsored by KFBG.

2. Methods

2.1 Surveys

Aquatic fauna were surveyed by direct observation and snorkelling during the wet season of 2012. From October to December 2012, botanists and ornithologists from the consultant carried out habitat, vegetation and bird surveys; for each enclave, the study area constitutes the enclave itself and accessible areas within 50m from the boundary. Habitat mapping was conducted by comparing aerial photographs and later through ground-truthing; vegetation surveys were conducted at the same time as the ground-truthing. Bird surveys were carried out on foot, beginning within 40 minutes of sunrise and continuing until around 10.30 am. Two surveys of each enclave were conducted, with the exception of PSO, for which more or less weekly surveys were conducted during the study period (October to December 2012). Results of the survey work were supplemented with data collected from occasional ad hoc surveys undertaken over the past seven years at PSO. Data collated from this longer and more intense period of observation were used to inform assessments of other enclaves in view of their close proximity (maximum 4 km between the two most distant) to each other.

2.2 Data from Other Sources

Personal observations by KFBG staff regarding the herpetofauna recorded at the enclaves were gathered to supplement the findings in this report. These observations were made in recent years (e.g., after 2000). Unpublished and published data from AFCD (e.g., AFCD newsletter *Hong Kong Biodiversity*) and other sources (e.g., Hong Kong Bird Watching Society) and scientific literature were reviewed and useful information related to the enclaves was extracted.

The general status of different habitats was assessed based on site observation, relative biological diversity and the presence or absence of species of conservation interest. Status of species mainly follows Fellowes *et al.* (2002), Hu *et al.* (2003), IUCN Red List, AFCD's database and other documented sources.

3. Results

3.1 Habitats and Vegetation

The area of habitat in each studied enclave (including the area 50 m from the boundary) is provided in Table 1. A complete plant list is provided in Appendix 1.

Table 1. Habitats in each study area (%)

Habitat type	PSO	NST	PTA	KT	TKP	CK	
Channelized watercourse			0.27				
Backshore vegetation				0.36	1.43	3.83	
Developed/ Village area	4.99	0.84	4.82	9.17	1.31	1.94	
Dry agricultural land	0.83			0.14			
<i>Fung shui</i> Woodland	4.76	4.97	3.64	2.62	6.96		
Grassland	0.41	7.65	5.00			1.60	
Shrubby grassland	0.88		7.65	0.99	6.25		
Mangrove				1.21	6.14	3.11	
Marsh	0.92		0.95	0.41			
Natural watercourse	2.82	1.99	0.85	2.62	0.88	3.42	
Plantation			1.26				
Pond			0.31	0.61			
Ruderal area*	0.06			0.18	1.04	0.19	
Sea				4.49	14.09	11.00	
Seasonally wet grassland	0.12		0.91	0.36			
Secondary woodland	84.21	84.55	72.71	76.84	61.47	74.91	
Waste ground			1.63		0.43		
Total %	100.00	100.00	100.00	100.00	100.00	100.00	Total
Total area (ha)	48.16	9.23	22.40	97.20	17.11	56.23	250.33

* waste ground with sparse vegetation cover (often invasive plants)

3.1.1 Pak Sha O

Ten habitats were identified within the PSO study area, comprising native secondary woodland, *fung shui* woodland, marsh, developed/village area, seasonally wet grassland, dry agricultural land, natural watercourse, grassland, shrubby grassland and ruderal area. Figure 2 shows the habitat map of PSO and PSOHY.

Native secondary woodland is the dominant habitat type within this enclave. The lowland woodland seems to have evolved from abandoned agricultural land through natural succession, while the remaining woodland located on the hillside is relatively mature. The woodland is extensively covered by climbers such as *Byttneria aspera*. The overstorey of this woodland habitat mainly consists of tree species *Cratoxylum cochinchinense*, *Alangium chinense*, *Viburnum odoratissimum* and *Mallotus paniculatus* of young age. Dominant species underneath the overstorey include common shrubs and trees (such as *Psychotria asiatica*, *Ardisia quinqueгона* and *Daphniphyllum calycinum*). A total of 100 floral species were identified. Five floral species of conservation concern were identified, including the herb *Houttuynia cordata*, fern *Cibotium barometz*, climber *Gnetum luofuense*, shrub *Pavetta hongkongensis* and tree *Aquilaria sinensis*.

A specimen of *Ludisia discolor* is present in the woodland at PSO. This species is regarded as infrequent but widespread in HK by Barretto *et al.* (2011), who note that most of Hong Kong's subpopulations are now feared extinct. They assign it a Red Data status of EN in Hong Kong.

Two areas of *fung shui* woodland are present; these are located behind the village areas at PSO and at PSOHY, respectively. PSO *fung shui* woodland is located in the south of the enclave and PSOHY *fung shui* woodland is located in the north (see Figure 2). The vegetation compositions of the two woodlands are similar and mainly consist of a closed canopy of common *fung shui* woodland native tree species such as *Aporosa dioica*, *Schefflera heptaphylla* and *Cinnamomum parthenoxylon*, with a well-developed understorey dominated by *Byttneria aspera*, *Maesa perlaris* and *Psychotria asiatica*. The presence of mature trees with average Diameter at Breast Height (DBH) of 30-60cm and well-developed woody climbers (*Byttneria aspera* and *Gnetum luofuense*) indicates that they are old-growth woodlands with limited human disturbance. Both *fung shui* woodlands support a moderate plant diversity (77 and 66 floral species were identified within PSO and PSOHY, respectively), with four plant species of conservation concern recorded, including the fern *Cibotium barometz*, climber *Gnetum luofuense*, shrub *Pavetta hongkongensis* and tree *Aquilaria sinensis*.

Four significant areas of natural freshwater marsh are present within the enclave. One of these is at PSOHY, while the remaining three are at PSO. The marshes evolved from abandoned agricultural land through natural succession. They have been utilized and maintained by feral cattle and are mainly dominated by wetland- or marsh-associated plant species including *Geissapis cristata*, *Ischaemum barbatum*, *Floscopa scandens*, *Philydrum lanuginosum*, *Impatiens chinensis* and *Cyclosorus interruptus*. This habitat supports moderate plant diversity (53 floral species) compared with similar habitat elsewhere in Hong Kong. Three species of conservation concern were identified, including the herbs *Houttuynia cordata* and *Geissapis cristata*, and one orchid species, *Liparis ferruginea*. Although the orchid species was only recorded in the marsh of PSOHY, the close proximity (< 500m) to the other three marshes in PSO and the fact that the growth environments of these marshes are similar to that of PSOHY, might suggest the likelihood that the same orchid species occurs at all three marshes. This orchid species is considered to be scarce and restricted in Hong Kong, and the local population has been estimated to be less than 50 individuals (Barretto *et al.* 2011); therefore it is considered to be locally Endangered (Barretto *et al.* 2011). Since this species is highly habitat-specific (wet lowland grassland) and this habitat type is under threat in Hong Kong, Barretto *et al.* (2011) have urged that conservation action should be undertaken to protect this species and its habitat.

An area of dry agricultural land is present at PSO. This was originally a natural freshwater marsh (Figure 3) evolved from abandoned agricultural land. During the second half of 2012, it was re-profiled and converted into active agricultural land (Figure 4). Remnants of wetland- or marsh-associated plant species such as *Impatiens chinensis*, *Floscopa scandens*, *Ludwigia adscendens* and *Polygonum glabrum* are present in the marshy area surrounding the existing agricultural land. The vegetation coverage of this habitat is low and most of the plant species were recorded from the surrounding marshy area only. A total of 36 plant species were recorded with one species of conservation concern, the herb *Geissapis cristata*, identified.

One small piece of seasonally wet grassland is present at the southwest of the enclave. Although the grassland was dry during the survey, the presence of several patches of wetland-associated plants (such as *Polygonum* spp.) suggests that the area is able to retain sufficient water for their growth during the wet season. Dominant species within this habitat include wetland herbs (*Polygonum pubescens* and *Geissapis cristata*) and subshrubs (*Urena procumbens* and *Urena lobata*). Twenty-two plant species were recorded with one species of conservation concern, the herb *Geissapis cristata*.

Several watercourses were discovered to run through the whole enclave, mainly under the canopy of the native secondary woodland. These watercourses are semi-natural (with a natural bottom covered with boulder, gravel and sand). Plant species such as *Acorus gramineus*, *Saurauia tristyla* and *Adina pilulifera* were commonly recorded along the bank. A total of 26 plant species were recorded with three species of conservation concern identified including the fern *Cibotium barometz*, the woody climber *Gnetum luofuense* and the shrub *Pavetta hongkongensis*.

The developed/village area includes access roads and a number village houses. Plant coverage and diversity were low in this habitat. Plant species such as the climbers *Ipomoea cairica*, *Ficus pumila* and *Bougainvillea spectabilis* were commonly recorded. Fifteen species were recorded with no species of conservation concern identified.

A small ruderal area (sparsely vegetated waste ground) is present behind the PSO village area. Species such as *Aporosa dioica*, *Pavetta hongkongensis* and *Maesa perlaris* were recorded. Fifteen plant species were recorded with one shrub species of conservation concern, *Pavetta hongkongensis*, identified.

3.1.2 Nam Shan Tung

Five habitats were identified within the NST study area, including native secondary woodland, *fung shui* woodland, developed/village area, natural watercourse and grassland. A habitat map is shown in Figure 5.

Native secondary woodland is the dominant habitat within this enclave, but the woodland in the lowland area is relatively young. It is believed that the lowland woodland evolved from abandoned farmland through natural succession. The remaining part of the woodland is located on the hillside and is relatively mature. The canopy of this habitat mainly consists of native tree species *Schefflera heptaphylla*, *Aporosa dioica*, *Cratoxylum cochinchinense* and *Cinnamomum parthenoxylon*. Dominant species in the understorey include common shrubs (*Psychotria asiatica* and *Ardisia crenata*), ferns (*Blechnum orientale* and *Cyclosorus parasiticus*) and climbers (*Byttneria aspera*). A total of 60 flora species were identified. Two flora species of conservation concern were identified, comprising the fern *Cibotium barometz* and the climber *Gnetum luofuense*.

A *fung shui* woodland is present in the middle of the enclave and behind the village. It consists of a closed canopy of common *fung shui* woodland tree species such as *Aporosa dioica* and *Schefflera heptaphylla*, and other native trees such as *Mallotus paniculatus*, with a well-developed understorey dominated by the fern *Blechnum orientale*, the climber *Dalbergia benthamii* and the shrub *Psychotria asiatica*. The presence of mature trees with an average DBH (Diameter at Breast Height) of 30-60cm and well-developed woody climbers indicates that the habitat represents old-growth woodland with limited human disturbance. This *fung shui* woodland supports moderate plant diversity (58 species) with two species of conservation concern identified, including the tree *Aquilaria sinensis* and the woody climber *Gnetum luofuense*.

Several watercourses were found running through the enclave, mainly under the canopy of the secondary woodland. These watercourses are largely natural (i.e. with a natural bottom). Plant species such as the riparian herb *Acorus gramineus* and the trees *Saurauia tristyla* and *Adina pilulifera* were commonly recorded along the watercourses. A total of 17 plant species were recorded with one species of conservation concern, the fern *Cibotium barometz*, identified.

The developed/village area is located in the middle of this enclave. Some abandoned village houses are overgrown with vegetation. Plant coverage and diversity are low in this habitat. Plant species such as the trees *Mallotus paniculatus* and *Ficus hispida* and exotic climber *Bougainvillea*

spectabilis were commonly recorded. Eighteen species were recorded with no species of conservation concern.

3.1.3 Pak Tam Au

Twelve habitats were identified within the PTA study area, including native secondary woodland, *fung shui* woodland, plantation, grassland, seasonally wet grassland, marsh, natural watercourse, channelized watercourse, pond, shrubby grassland, waste ground and developed/village area. A habitat map is shown in **Figure 6**.

The area surrounding the enclave comprises predominantly young secondary woodland. The mixed canopy consists mainly of *Alangium chinense*, *Bischofia javanica*, *Cleistocalyx operculatus*, *Machilus chekiangensis*, *Mallotus paniculatus* and *Viburnum odoratissimum*. The woodland supports moderate to high plant diversity, with a total of 103 flora species identified. Two species of conservation concern were identified, including the tree *Aquilaria sinensis* and the shrub *Pavetta hongkongensis*.

Fung shui woodland is located to the north and behind the village. The overstorey is dominated by a closed canopy of common *fung shui* woodland tree species such as *Aporosa dioica*, *Alangium chinense* and *Schefflera heptaphylla*. The understorey is well-developed and dominated by the shrubs *Ardisia crenata*, *Uvaria macrophylla* and *Psychotria asiatica*. The presence of mature trees with an average height of 12-16 m indicates that the habitat consists of old-growth woodland. The *fung shui* woodland supports moderate plant diversity (60 floral species identified) with one species of conservation concern, the tree *Aquilaria sinensis*, present.

Two patches of plantation are present in the middle of the enclave. They comprise mainly exotic plantation tree species such as *Acacia confusa*, together with common native but planted tree species (i.e., *Ficus microcarpa*). The understorey consists of common shrubs (such as *Melastoma malabathricum*, *Urena lobata* and *Rhodomyrtus tomentosa*). A total of 44 floral species were recorded with one species of conservation concern, the tree *Aquilaria sinensis*, identified.

Grassland is present in the middle of the enclave, and this area is maintained by feral cattle. Dominant species include herbs (*Ischaemum barbatum*, *Axonopus compressus* and *Chrysopogon aciculatus*) and shrubs (*Melastoma malabathricum*). The grassland supports moderate plant diversity (80 plant species), with one species of conservation concern, the herb *Geissapis cristata*, identified.

One small area of seasonally wet grassland was identified at the edge of the grassland habitat (on the northeastern side). Although the area was dry during the survey period, the presence of several patches of wetland-associated plants such as *Philydrum lanuginosum* suggested that water accumulates during the wet season. Dominant species within this habitat include wetland herbs (*Philydrum lanuginosum*, *Paspalum scrobiculatum* var. *orbiculare* and *Pycnus polystachyus*). Eleven plant species were recorded with one species of conservation concern, the herb *Geissapis cristata*, identified.

Marsh is present at the edge of the grassland (also on the northeastern side), next to the seasonally wet grassland. It is maintained by feral cattle and appears wet enough for the establishment of some common wetland plant species, including *Paspalum orbiculare*, *Pycnus polystachyus* and *Eriocaulon* sp. The habitat supports limited plant diversity (21 flora species) with two species of conservation concern, the herb *Geissapis cristata* and the scarce and restricted orchid *Liparis ferruginea*. This orchid species is considered to be locally Endangered (Barretto *et al.* 2011).

Watercourses that are predominantly natural are located in the south and east of the enclave; some sections of the streams are bounded by retaining walls, and there are weirs present along several sections. At the time of the habitat survey, water was fairly shallow covering rocky substrate and with some deep pools. The surrounding habitat type along the natural watercourses is secondary woodland. A total of 20 plant species were recorded with no species of conservation concern identified.

The natural sections of the watercourse system are connected by a concrete channel in the middle of the enclave. However, the channel still functions as a corridor between two natural stream sections.

Two ponds are present in the north and in the centre of the enclave. They are located under the canopy of the secondary woodland and are overgrown with wetland-associated plants such as the fern *Cyclosorus interruptus*, the grass *Leersia hexandra*, the herb *Commelina diffusa* and the floating herb *Eichhornia crassipes*. The ponds are linked with the watercourses.

Shrubby grassland is located in the south of the enclave. Dominant species include shrubs such as *Melastoma malabathricum*, *Rhodomyrtus tomentosa* and *Glochidion lanceolarium* and the fern *Dicranopteris pedata*. The shrubby grassland supports limited plant diversity (36 plant species were recorded).

An area of waste ground is present in the southwest of the enclave. Most of the area is still bare exposed ground. Fifteen plant species were recorded.

Plant coverage and diversity in the developed/village area are low. Plant species such as the herb *Ageratum conyzoides*, and planted trees *Psidium guajava* and *Ficus microcarpa* were recorded.

3.1.4 Ko Tong

Thirteen habitat types were identified within the KT study area, including native secondary woodland, *fung shui* woodland, marsh, developed/village area, seasonally wet grassland, dry agricultural land, natural watercourse, ruderal area, marine area, mangrove, backshore vegetation, shrubby grassland and pond habitat. A habitat map is shown in **Figure 7**.

The enclave area comprises mainly native secondary woodland. The woodland in the lowland area appears to represent succession from abandoned farmland, and is considered to be fairly young. The remaining woodland on the hillside is relatively mature. The canopy of this habitat consists mainly of native tree species such as *Alangium chinense*, *Mallotus paniculatus*, *Viburnum odoratissimum* and *Machilus chekiangensis*. Dominant species below the canopy include common shrubs and trees such as *Psychotria asiatica*, *Uvaria macrophylla* and *Daphniphyllum calycinum*. A total of 86 flora species were identified. Two species of conservation concern, the tree *Aquilaria sinensis* and the shrub *Pavetta hongkongensis*, were identified.

Two stands of *fung shui* woodland are located behind the villages at KT and KTHY. Vegetation compositions of these two *fung shui* woodlands are similar and mainly consist of common *fung shui* woodland tree species such as *Dimocarpus longan*, *Alangium chinense*, *Aporosa dioica* and *Schefflera heptaphylla*. Understorey vegetation is well-developed, and includes the climber *Byttneria aspera* and shrubs *Psychotria asiatica* and *Maesa perularius*. The presence of mature trees with an average height of 12-15 m and woody climbers indicates that the woodland is old and has had limited human disturbance. Since it is not easy to access the *fung shui* woodlands because of the difficult site conditions, surveys were conducted using binoculars from a distance and thus plant species recorded were limited (46 and 18 flora species were identified within the KT *fung shui* woodland and KTHY *fung shui* woodland respectively). Three species of conservation concern

were identified including the woody climber *Gnetum luofuense*, the shrub *Pavetta hongkongensis* and the tree *Aquilaria sinensis*.

Several natural watercourses run through the enclave, and under the native secondary woodland canopy. Plant species such as the trees *Cleistocalyx nervosum*, *Viburnum odoratissimum*, *Hibiscus tiliaceus* and the invasive climber *Mikania micrantha* are common along the stream banks. A total of 16 plant species were recorded with no species of conservation concern identified.

An area of mangrove is present along the seashore at TT (to the northeast of the enclave). Dominant species include common mangrove species such as *Kandelia obovata*, *Excoecaria agallocha* and *Aegiceras corniculatum*. A total of 12 plant species were recorded with no species of conservation concern identified.

Backshore vegetation is present behind the mangrove, and forms a transition between the mangrove and the secondary woodland and/or shrubland. Vegetation found in this area is a mix of mangrove, shrubs and secondary forest species dominated by woody plants with an average height of 2-3 m. Dominant species include the trees *Hibiscus tiliaceus* and *Viburnum odoratissimum*, and the shrubs *Paliurus ramosissimus* and *Pandanus tectorius*. A total of 23 plant species were recorded with no species of conservation concern identified.

One small and one large freshwater pond were identified in the enclave. The area adjacent to the small pond was fenced off and no survey could be carried out. The large pond is located within the secondary woodland. With regard to the existing topography and location of this large pond, it appears that the pond connects to and collects water from seasonal streams flowing from the adjacent hillside. Vegetation surrounding the pond was mainly composed of woody plants such as the shrubs *Rhodomyrtus tomentosa* and *Glochidion zeylanicum*, and the tree *Mallotus paniculatus*.

Two areas of freshwater marsh were identified. One marsh is directly connected with the large pond; another marsh is located in the south of the enclave and near the village area. It is believed that these marshes have been utilized and maintained by feral cattle, and are mainly dominated by wetland- or marsh-associated plant species including the grasses *Ischaemum barbatum*, *Ischaemum ciliare* and *Panicum dichotomiflorum*, and other herbs *Geissapis cristata* and *Philydrium lanuginosum*. This habitat supports moderate plant diversity (40 species) compared with other similar freshwater habitats in Hong Kong, and one species of conservation concern, the herb *Geissapis cristata*, was identified.

Three small areas of dry agricultural land were identified in the middle, south and east of the enclave respectively. Common fruit tree species such as *Citrus reticulata*, *Citrus maxima* and *Carica papaya* and crop species, *Ipomoea batatas*, were recorded.

One small area of seasonally wet grassland was identified in front of the KTHY village. Although the area was dry during the survey period, the presence of several patches of wetland-associated plants such as *Polygonum* spp. suggests the area would be inundated during the wet season. Dominant species in this habitat include wetland herbs (*Geissapis cristata*, *Polygonum pubescens* and *Philydrium lanuginosum*) and shrubs (*Melastoma malabathricum* and *Glochidion zeylanicum*). Nineteen plant species were recorded, with one species of conservation concern, *Geissapis cristata*, identified.

Two areas of shrubby grassland were identified in the enclave, probably developed through the natural succession of the abandoned farmland. Dominant species include the shrubs (*Lantana camara*, *Senna tora* and *Urena lobata*) and herbs (*Axonopus compressus* and *Mimosa pudica*).

The developed/village area in this enclave comprises roads, village houses, a barbecue site and an open storage area. In general, plant coverage is low in this habitat type except for the barbecue site in the north of the enclave. Plant species such as the grass *Axonopus compressus*, the weedy climber *Mikania micrantha* and the weedy shrub *Lantana camara* were commonly recorded. This habitat supports limited plant diversity with 34 species recorded. One species of conservation concern, the tree *Aquilaria sinensis*, was identified near the barbecue site.

Three small areas of ruderal habitat are located at TT (north of the enclave) and KT (south of the enclave). Species such as the grass *Axonopus compressus*, the sub-shrubby herb *Urena lobata*, and the shrubs/small trees *Ardisia quinquegona* and *Rhus hypoleuca* were common. Thirty-four plant species were recorded, with one species of conservation concern identified, the shrub *Pavetta hongkongensis*.

3.1.5 To Kwa Peng

Ten habitats were identified within the TKP study area, including native secondary woodland, *fung shui* woodland, developed/village area, waste ground, shrubby grassland, ruderal area, mangrove, backshore vegetation area, marine area and natural watercourse. A habitat map is shown in Figure 8.

Native secondary woodland is the dominant habitat type within this enclave. The woodland is mainly composed of a closed canopy of common native tree species such as *Aporosa dioica*, *Machilus chekiangensis*, *Schefflera heptaphylla* and *Sterculia lanceolata*. The understorey is well developed, dominated by the fern *Blechnum orientale*, the herb *Microstegium ciliatum* and the shrubs *Maesa perlaris* and *Sarcandra glabra*. A total of 57 flora species were identified, with two species of conservation concern, the fern *Cibotium barometz* and the shrub *Pavetta hongkongensis*.

A small *fung shui* woodland is present behind the village area. It is composed of a closed canopy of common *fung shui* woodland tree species such as *Aporosa dioica* and *Antidesma bunius*, and other native trees such as *Mallotus paniculatus*. Its understorey is dominated by shrubs *Lasianthus attenuatus*, *Sarcandra glabra* and *Psychotria asiatica*. The presence of mature trees with an average height of 12-16 m suggests that the habitat represents old woodland with limited human disturbance. The *fung shui* woodland supports moderate plant diversity (64 floral species), including three species of conservation concern, the tree *Aquilaria sinensis*, the shrub *Pavetta hongkongensis* and the woody climber *Gnetum luofuense*.

Two natural watercourses are present in the east and the west of the enclave, predominantly covered by the canopy of the secondary woodland. The watercourses have natural stream beds. Plant species such as the common grass *Ischaemum barbatum*, the shrub *Pandanus tectorius* and the tree *Hibiscus tiliaceus* are common along the streamside. A total of eight plant species were recorded with no species of conservation concern identified.

An area of undisturbed mangrove is present along the shore. Dominant plants include common mangrove species such as *Kandelia obovata*, *Excoecaria agallocha* and *Avicennia marina*. During the survey, a total of 15 plant species were recorded with no species of conservation concern identified; however, Kwok *et al.* (2005) recorded a seagrass *Halophila minor* at the TKP mudflat, adjacent to the mangrove area.

Backshore vegetation is present behind the mangrove in the landward direction, forming a transition zone between the mangrove and the secondary woodland/shrubland. This habitat comprises a mix of mangrove, shrubs and secondary forest species, mainly dominated by woody plants with an average height of 2-3 m. Dominant species include the tree *Hibiscus tiliaceus*, the tree palm

Phoenix loureiroi, and the shrubs *Pandanus tectorius* and *Paliurus ramosissimus*. A total of 12 plant species were recorded with no species of conservation concern identified.

The developed/village area is located in the middle of the enclave. Plant coverage and diversity are low in this habitat. Weedy plant species recorded include climbers *Ipomoea cairica*, *Mikania micrantha* and the exotic shrub *Solanum torvum*. Sixteen species were recorded with no species of conservation concern identified.

A small waste ground area was identified in the west, close to the enclave boundary. It appears to be the remains of a village area. Grasses (*Neyraudia reynaudiana* and *Microstegium ciliatum*) and weedy climbers (*Mikania micrantha* and *Pueraria lobata*) were recorded. A total of 25 plant species were recorded with no species of conservation concern identified.

A shrubby grassland area is located in front of the village area, in the middle of the enclave. Dominant species include shrubs (*Melastoma malabathricum*, *Lantana camara* and *Glochidion zeylanicum*), herbs (*Axonopus compressus* and *Praxelis clematidea*) and climbers (*Mikania micrantha*). This habitat supports low to moderate plant diversity (41 species) with two species of conservation concern identified, the shrub *Pavetta hongkongensis* and the tree *Zanthoxylum ailanthoides*.

A ruderal area is present within the shrubby grassland. Plant diversity is low with only 12 species recorded. No species of conservation concern was identified and all species recorded are common and widespread in Hong Kong.

3.1.6 Chek Keng

Eight habitats were identified within the CK study area, including native secondary woodland, developed/village area, natural watercourse, ruderal area, mangrove, backshore vegetation area, grassland and marine area. A habitat map is shown in Figure 9.

Native secondary woodland is the dominant habitat type. The secondary woodland in the low-lying areas appears to have developed from abandoned farmland through natural succession. The remaining woodland on the hillside is considered to be relatively mature, and is covered to a significant extent by climbers such as *Bauhinia glauca*. The canopy of this habitat mainly consists of the native tree species *Schefflera heptaphylla*, *Aporosa dioica*, *Alangium chinense* and *Glochidion zeylanicum*. The understorey is dominated by common shrubs and trees (*Psychotria asiatica*, *Ilex pubescens* and *Cratoxylum cochinchinense*). The woodland supports moderately high plant diversity with a total of 164 flora species identified. Five flora species of conservation concern were recorded including the fern *Cibotium barometz*, the woody climber *Gnetum luofuense*, the shrubs *Pavetta hongkongensis* and *Diospyros vaccinioides* and the tree *Aquilaria sinensis*.

Several watercourses run through the enclave and mostly within the native secondary woodland. The watercourses are largely natural with natural stream bed retained. Most of the hillside streams at the western end were dry and are expected to be seasonally wet only. The two large stream systems in the middle and in the east of the enclave are permanent. Plant species such as the trees *Cleistocalyx nervosum*, *Viburnum odoratissimum* and the woody vine *Gymnanthera oblonga* were common at the location. A total of 42 plant species were recorded, with one species of conservation concern identified, the shrub *Diospyros vaccinioides*.

The developed/village area includes village houses and a pier. Plant coverage is low and plant diversity is limited in this habitat type. Orchard trees *Psidium guajava* and *Dimocarpus longan* were recorded. Thirty-nine species were recorded with one species of conservation concern identified, the tree *Zanthoxylum ailanthoides*.

A small area of ruderal habitat is present in front of the village area. The area appears to be abandoned farmland invaded by the ruderal vegetation such as the weedy climbers *Mikania micrantha* and *Wedelia trilobata* and the shrub *Lantana camara*. Some woody plants such as the tree *Viburnum odoratissimum* and *Daphniphyllum calycinum* were also recorded. Most of this habitat has been encroached by climbers ten plant species were recorded with no species of conservation concern.

An area of undisturbed mangrove is present along the shore. Common mangrove species *Kandelia obovata*, *Avicennia marina*, *Aegiceras corniculatum* and *Excoecaria agallocha* are dominant. A total of eight plant species were recorded with no species of conservation concern identified.

Backshore vegetation is present behind the mangrove in the landward direction, and forms a transition zone between the mangrove and the secondary woodland. Dominant species include the shrub *Paliurus ramosissimus*, and the trees *Hibiscus tiliaceus* and *Cerbera manghas*, which are often regarded as mangrove-associates. A total of 16 plant species were recorded with no species of conservation concern identified.

Grassland is present in the middle of the enclave. This area is constantly maintained by feral cattle and disturbed by human activities (e.g., camping). Dominant species include the herbs (*Axonopus compressus*, *Chrysopogon aciculatus* and *Elephantopus scaber*) and the small tree (*Paliurus ramosissimus*). The grassland supports moderate plant diversity (60 plant species) with one species of conservation concern identified, the tree *Zanthoxylum ailanthoides*.

3.2 Plant Species of Conservation Concern

The tree *Aquilaria sinensis* was recorded within all study areas. Topping and cut wounds were observed on some mature specimens with an average DBH of around 20-40 cm. This species is subject to illegal damage and removal at an unsustainable level. Populations may also be affected by destruction of suitable habitats locally. The species is listed as Near Threatened (NT) in the China Red Data Book and is under State protection (Category II) in China (Hu *et al.* 2003). It is also classified as Globally Vulnerable in the IUCN Red List of Threatened Species (IUCN 2013). In Hong Kong, this species is provided legal protection (Cap. 586).

The fern *Cibotium barometz* was recorded at CK, NST, TKP and PSO. This species is listed as Vulnerable (VU) in the China Red Data Book and is under State protection (Category II) in China (Hu *et al.* 2003). This species is protected under Cap. 586 in Hong Kong, but is suffering from overexploitation for traditional medicine.

The shrub *Pavetta hongkongensis* was recorded in all study areas except NST. The height of the individuals recorded range from 0.3-2.5 m. *P. hongkongensis* is a common shrub species found in tall thickets and forest in Hong Kong (AFCD 2009). The wild population of this species is protected under Forestry Regulation (Cap. 96A) in Hong Kong.

The orchid *Liparis ferruginea* was recorded at the marsh in PSOHY and PTA only. This species is regarded as scarce and restricted, and is Endangered in Hong Kong (Barretto *et al.* 2011). This species is highly habitat-specific, and the suitable habitats (mainly boggy, lowland grassland) are at greater risk of loss or degradation than most other local habitat types (Barretto *et al.* 2011). This species is protected under Cap. 96A and Cap. 586 in Hong Kong.

A specimen of the orchid *Ludisia discolor* is present in the woodland at PSO. This species is regarded as infrequent but widespread in Hong Kong by Barretto *et al.* (2011), who note that most of the local subpopulations are now feared extinct. They assign it a Red Data status of EN in Hong Kong.

The shrub *Diospyros vaccinioides* was recorded only in CK. All individuals recorded were in seedling or sapling form, with a height of around 0.3-1.5 m. This species is classified as Globally Critically Endangered on the IUCN Red List of Threatened Species (IUCN 2013). According to the IUCN Red List, the wild population of *D. vaccinioides* has been heavily-exploited and collected as an ornamental species in Taiwan, leading to the complete absence of mature trees in the wild.

The herb *Geissaspis cristata*, which was recorded in the KT, PTA and PSO study areas only, is a locally rare species according to Xing *et al.* (2000). According to AFCD (2008), it is restricted to several locations in Hong Kong including Deep Water Bay, Tai Mong Tsai, Sai Keng and Lantau Island.

The woody climber *Gnetum luofuense* was recorded in all study areas except PTA. This species is listed as Globally Near Threatened on the IUCN Red list due to threats caused by habitat loss.

The herb *Houttuynia cordata*, which was recorded at PSO only, is locally a very rare species according to Xing *et al.* (2000). According to AFCD (2007), it is restricted to several locations in Hong Kong, including Lam Tsuen and Sha Lo Tung.

The tree *Zanthoxylum ailanthoides* was recorded in TKP and CK. A locally rare species (Xing *et al.* 2000), according to AFCD (2008), it is restricted to several locations in Hong Kong such as Chek Keng and Tai Long Sai Wan.

3.3 Amphibians and Reptiles

Most amphibian and reptile (herpetofauna) species are highly mobile and many are habitat-generalists. As the CP enclaves are close to each other and their habitats are linked by intervening secondary woodland, it is expected that the herpetofauna communities in these enclaves would be similar to each other. Surveys have, however, recorded more species of conservation concern in certain enclaves; this could be due to the relatively higher habitat diversity of those enclaves, or simply due to unequal survey effort.

Herpetofauna species recorded from the enclaves, based on the personal observations of KFBG staff during the last decade, are listed in the table below.

Table 2. Herpetofauna species recorded

Species Name & Common Name	Conservation Status*	Habitat Requirement	PSO	NST	PTA	KT	TKP	CK
<i>Bufo melanostictus</i> Asian Common Toad	Nil	Generalist	+		+	+		
<i>Fejervarya limnocharis</i> Paddy Frog	Nil	Marsh, agricultural land	+					
<i>Hoplobatrachus chinensis</i> Chinese Bull Frog	1. Potential Regional Concern	Marsh, agricultural land, slow-flowing stream, pond	+					
<i>Paa exilispinosa</i> Lesser Spiny Frog	1. Potential Global Concern 2. Vulnerable	Watercourse	+					
<i>Rana chloronata</i> Green Cascade Frog	Nil	Watercourse	+					
<i>Rana guentheri</i> Gunther's Frog	Nil	Marsh, slow-flowing stream, pond, agricultural land	+		+	+		
<i>Rana latouchii</i> Brown Wood Frog	1. Local Concern	Woodland	+					

Species Name & Common Name	Conservation Status*	Habitat Requirement	PSO	NST	PTA	KT	TKP	CK
<i>Rana taipehensis</i> Two-striped Grass Frog	1. Local Concern	Marsh, pond	+					
<i>Polypedates megacephalus</i> Brown Tree Frog	Nil	Marsh, agricultural land, pond	+		+	+		
<i>Boiga multimaculata</i> Large-spotted Cat Snake	Nil	Woodland, shrubland	+		+	+		
<i>Bungarus fasciatus</i> Banded Krait	1. Regional Concern 3. Endangered	Generalist	+					
<i>Bungarus multicinctus</i> Many-banded Krait	1. Potential Regional Concern 3. Vulnerable	Generalist	+		+	+		
<i>Cyclophiops major</i> Greater Green Snake	Nil	Woodland	+			+		+
<i>Elaphe porphyracea</i> Red Mountain Racer	1. Local Concern 3. Vulnerable	Woodland	+			+		
<i>Elaphe radiata</i> Copperhead Racer	1. Potential Regional Concern 3. Endangered	Generalist	+		+	+		
<i>Enhydryis plumbea</i> Plumbeous Water Snake	Nil	Wetland	+					
<i>Lycodon subcinctus</i> Banded Wolf Snake	Nil	Woodland	+					
<i>Naja atra</i> Chinese Cobra	1. Potential Regional Concern 3. Vulnerable	Generalist	+		+	+	+	
<i>Oligodon cinereus</i> Golden Kukri Snake	1. Local Concern	Woodland	+			+		
<i>Oligodon formosanus</i> Taiwan Kukri Snake	Nil	Generalist	+			+		
<i>Ophiophagus hannah</i> King Cobra	1. Potential Regional Concern 2. Vulnerable 3. Critically Endangered	Generalist	+			+		
<i>Opisthotropis balteatus</i> Banded Stream Snake	Nil	Watercourse	+			+		
<i>Opisthotropis andersonii</i> Anderson's Stream Snake	Endemic to the region 1. Potential Global Concern 2. Near Threatened	Watercourse	+					
<i>Pareas margaritophorus</i> White-spotted Slug Snake	Nil	Woodland, shrubland	+		+	+		
<i>Protobothrops mucrosquamatus</i> Pointed-scaled Pit Viper	1. Local Concern	Woodland	+					
<i>Psammodynastes pulverulentus</i> Mock Viper	Nil	Woodland, shrubland, grassland	+			+		
<i>Ptyas mucosus</i> Common Rat Snake	1. Potential Regional Concern 3. Endangered	Generalist	+		+	+		
<i>Python bivittatus</i> Burmese Python	1. Potential Regional Concern 2. Vulnerable 3. Critically Endangered	Generalist	+		+	+	+	

Species Name & Common Name	Conservation Status*	Habitat Requirement	PSO	NST	PTA	KT	TKP	CK
<i>Ramphotyphlops braminus</i> Common Blind Snake	Nil	Generalist	+					
<i>Rhabdophis subminiatus</i> Red-necked Keelback	Nil	Woodland, shrubland	+		+	+		+
<i>Sibynophis chinensis</i> Chinese Mountain Snake	1. Local Concern	Woodland	+					
<i>Cryptelytrops (Trimeresurus) albolabris</i> Bamboo Snake	Nil	Shrubland, grassland	+		+	+		
<i>Xenocrophis piscator</i> Checkered Keelback	Nil	Wetland	+					
<i>Ateuchosaurus chinensis</i> Chinese Forest Skink	Nil	Woodland	+					
<i>Calotes versicolor</i> Changeable Lizard	Nil	Lowland area, shrubland, agricultural land	+		+	+		+
<i>Eumeces chinensis</i> Chinese Skink	Nil	Lowland area, shrubland, agricultural land	+		+			
<i>Plestiodon tamdaoensis</i> Vietnamese Five-lined Skink	Found in Hong Kong recently, highly restricted in distribution (Chan <i>et al.</i> 2009)	Woodland	+					
<i>Gekko chinensis</i> Chinese Gecko	Nil	Generalist	+		+			
<i>Gekko gecko</i> [^] Tokay Gecko	1. Regional Concern 3. Endangered	Woodland	+					
<i>Hemidactylus bowringii</i> Bowring's Gecko	Nil	Generalist	+					
<i>Mabuya longicaudata</i> Long-tailed Skink	Nil	Generalist			+			
<i>Scincella reevesii</i> Reeve's Smooth skink	Nil	Woodland	+					
<i>Sphenomorphus indicus</i> Indian Forest Skink	1. Local Concern	Woodland	+					
<i>Takydromus sexlineatus</i> Grass Lizard	Nil	Grassland, woodland	+					
<i>Tropidophorus sinicus</i> Chinese Waterside Skink	Nil	Stream	+			+		

*1. Fellowes *et al.* (2002); 2. IUCN Red List (IUCN 2013); 3. China Red Data Book (AFCD 2013)

[^]Some scholars consider that the South China *G. gecko* should be renamed as *G. reevesii* (Rösler *et al.* 2011)

Herpetofauna diversity at PSO, PTA and KT is considered to be relatively high; the habitat mosaic in these enclaves probably contributes to the high diversity. The presence of marsh and seasonally wet grassland can greatly enhance habitat heterogeneity (i.e., breeding site for amphibians). We should also point out that the number of species discovered would also be reflected by survey effort which may not have been equal for all sites.

In addition, a reptile species of high conservation concern (not listed in Table 2) has been discovered in KT and PSO, and because the wild populations are under severe threat the identity has not been reported in this document. The species is Critically Endangered (IUCN 2013). Another

herpetofauna species considered to be Globally Endangered (IUCN 2013) has also been found in PSO. The two species can utilize streams, marshes, riparian areas and woodlands.

3.4 Fish

All enclaves contain aquatic habitats (streams, ponds and marshes) that support aquatic fauna and several fish of conservation importance. The estuaries at KT, TKP and CK are also believed to be fish nurseries (see below).

3.4.1 Fish Species of Conservation Importance

The watercourses (both channelized and natural) and the two ponds at PTA provide habitats for Hong Kong Paradise Fish (*Macropodus hongkongensis*). This species was once considered endemic to Hong Kong, and it is considered to be a key species of conservation importance by AFCD (AFCD 2013) and of Global Conservation Concern by Fellowes *et al.* (2002). This species can also be found in the Hau Tong Kai stream at TT (the KT enclave).

Watercourses and associated marshes at PSO provide habitats for a rare fish *Pseudobagrus trilineatus*. This catfish species can only be found at two sites in Hong Kong and is considered to be a key species of conservation concern by AFCD (2013). KFBG staff observations confirm that this species is also present in watercourses at NST, which belong to the same stream network.

One Giant Marbled Eel (*Anguilla marmorata*) was discovered in the watercourse at PSO. This is a catadromous species which needs to migrate between the sea and the stream; in order to protect this species, the stream-ocean corridor should not be blocked (i.e., channelized at sections or culverted); stream flow and the stream bed should remain natural (e.g., stream flow should not be reduced); simply speaking, the whole stream should be preserved in order to protect this species. The conservation status of this species is as follows: conservation concern (AFCD 2011a), Endangered in the China Species Red List (AFCD 2011a), Class II State Key Protected Wildlife in China (AFCD 2011a) and Global Conservation Concern (Fellowes *et al.* 2002). The presence of this species at PSO indicates that the stream system in this enclave is still linked with the sea, and thus can provide habitats for diadromous species. This species will spend a considerable amount of its life in streams with natural bottoms (with large rocks, gravel and sand). We believe that several streams in other enclaves can also provide suitable habitats for this species as the streams are largely natural and connected to the sea (PTA: connected to Pak Tam Chung; NST: connected to PSO and eventually to Hoi Ha Wan; KT, TKP and CK streams: coastal); for instance, we have observed a Mittern Crab (also a diadromous species) at PTA.

A rare goby, *Stiphodon multisquamis*, was found in the two main watercourses at CK during the survey, and has also been observed in the main stream at KT (KFBG Staff Pers. Obs.). This is an amphidromous species with a complex life cycle: adults live and breed in freshwater streams; eggs hatch in freshwater streams and larvae drift passively to the sea; larvae grow in the marine environment and juveniles actively return to freshwater streams. Therefore, in order to protect this species, the stream-ocean corridor should not be blocked; stream flow and the stream bed should remain natural (e.g., stream flow should not be further reduced); simply speaking, the whole stream should be preserved. It is a species considered to be of Global Conservation Concern by Fellowes *et al.* (2002) and Nip (2010), and is considered to be Endangered in China (Wu and Zhong 2008). It is also considered to be endemic to China (Wu and Zhong 2008). Another rare goby, *S. atropurpureus*, has also been found in the main stream at KT (KFBG Staff Pers. Obs.). It is also an amphidromous species, and is considered to be of Global Conservation Concern by Fellowes *et al.* (2002), although Nip (2010) considers it to be of Regional Conservation Concern as this species is common in the Philippines (Watson and Chen 1998). The stream system at TKP should also be able to provide habitats for the aforementioned goby species.

3.4.2 Marine Fish Nursery

During the survey in the estuaries at CK, many juvenile fishes were observed (e.g., **Figure 10**). These estuaries and those at TKP and KT are believed to function as fish nursery habitats. Nip and Wong (2010) considered that mangrove mudflats in eastern Hong Kong provide nursery habitats for fishes; it is thus considered that the mangrove areas at KT, TKP and CK are likely to provide this function.

3.5 Crustaceans

AFCD has conducted a detailed Sesarmine Crab survey and identified that TT (Tai Tan, within the KT enclave) and TKP are important areas for Sesarmine Crabs (Kwok and Tan 2005); an endemic Sesarmine Crab, *Pseudosesarma patshuni*, was also found at TT and TKP during their survey. Kwok and Tang (2005) also considered that the riparian zone, stream, estuary, marsh, mangrove and backshore vegetated area are ecologically important to Sesarmine Crabs, and the diversity of Sesarmine Crabs can indicate the "intactness" of the mangrove ecosystem.

During the site visit conducted in June 2012 at CK, the riparian zones of the streams were found to contain many burrows of Sesarmine Crabs (**Figure 11**). Certain species were also recorded far from the shore, including one considered to be less commonly found in Hong Kong – *Chiromantes haematocheir* (**Figure 12**). According to Kwok and Tang (2005), only a healthy mangrove ecosystem can contain enough habitat heterogeneity for a diverse Sesarmine Crab community. The observations made during this site visit indicate that CK, like its adjacent areas (TT and TKP), also contains a diverse Sesarmine Crab community and this implies that the mangrove ecosystem is intact (i.e., containing estuaries, streams, natural riparian zones, marshes, mangrove, and backshore vegetation).

A shrimp with restricted distribution, *Palaemon debilis*, which only appears in estuaries along the eastern coast of Hong Kong, was found at the mouths of both streams at CK. In China, this species has only been reported from Hainan Island (Li *et al.* 2007). Thus Hong Kong is the second site in China where this species is known to occur and is also the only known site currently where this species can be found on the Mainland. In view of its restricted distribution, we consider that *P. debilis* is of conservation concern. The species should also be present at KT and TKP (estuarine habitats).

A freshwater shrimp, *Macrobrachium meridionalis*, an amphidromous species, was also discovered in a stream at CK. This species is not common in Hong Kong and is of local conservation interest (KFBG Staff Pers. Obs.). This species should also be present in the watercourses at KT and TKP.

3.6 Birds

The subject enclaves are all located within the general locality of Long Harbour (Tai Tan Hoi), and the westernmost and easternmost enclaves, NST and CK respectively, are separated by only 4.2 km. Given the mobility of birds, similar habitats within these enclaves are likely to support similar avifauna communities. Consequently, descriptions of bird occurrence have been carried out by habitat, rather than by enclave. Although the relative abundances of species within given habitats in each enclave may differ, broadly speaking species composition would be very similar.

Appendix 2 lists species that have been recorded in Sai Kung West CP based on Carey *et al.* (2001), subsequent issues of the Hong Kong Bird Report, data collected for the Hong Kong Bird Watching Society Winter Atlas project and surveys undertaken for the present report. Where a species occurrence within the enclaves can reasonably be predicted based on adjacent records indicated in the above sources, this is also mentioned.

3.6.1 Secondary Woodland and Fung Shui Woodland

These closely-related habitats are dominant across all enclaves, constituting 61.47% to 84.55% of the area of each, and 75.78% across all six enclaves. They are also the richest in terms of the diversity of the avifauna, particularly in the months October to February, when local bird populations are joined by migrants and winter visitors from further north. The habitats support a substantial number of species categorized by Fellowes *et al.* 2002 as of Local Concern; in addition, the Brown Fish Owl, which is of Regional Concern, is dependent on undisturbed, natural watercourses with good water quality, which are closely associated with forested areas. A Brown Fish Owl has been recorded uttering a territorial call from a location in the PSO enclave, indicating breeding in the vicinity (survey team, pers. obs).

3.6.2 Shrubby Grassland

Although the shrubby grassland habitat supports a similar range of species as secondary woodland, overall diversity of species and abundance of individuals is lower, and certain forest specialists are absent.

3.6.3 Grassland

No grassland specialist species were recorded. It is suggested that the Eurasian Eagle Owl may utilize the grassland habitats adjacent to the enclaves; but it should be noted that this species has a fairly wide home range.

3.6.4 Dry Agricultural Land

In the studied enclaves, this habitat supports low species diversity.

3.6.5 Seasonally Wet Grassland

The seasonally wet (rather than permanently wet) nature of this habitat with its lack of microhabitat diversity leads it to support a low diversity of common and widespread species. In addition, only very small patches of this habitat are present (at PTA, KT, CK and PSO).

3.6.6 Marsh

Marsh habitat is present in three enclaves: PSO, PTA and KT. Small ardeids, White-breasted Waterhen and Eurasian Woodcock utilize these marshes; in addition, the Brown Fish Owl has been recorded foraging in the marsh at PSO.

3.6.7 Pond

Pond habitat is present only at PTA and KT. The area of this habitat is very small, and individual ponds are fragmented; both diversity and abundance of wetland-dependent bird species was low.

3.6.8 Natural Watercourse

Natural watercourse habitats are present in all enclaves, commonly flowing through forested areas. The Brown Fish Owl forages in undisturbed, unpolluted lowland streams and tidal creeks (Carey *et al.* 2001); many HK records refer to stream sections with slower water flow, especially at the interface of freshwater and marine environments. Such conditions can be found at CK and KT, and it may be that this species forages in these areas.

The natural watercourse running through NST and PSO is the Hoi Ha Stream, of which the section through PSO is designated as an Ecologically Important Stream (EIS) by AFCD. The lower reaches of this stream, where it meets the sea at Hoi Ha Wan, is known to be frequented by the Brown Fish Owl; thus, changes in water quality of the upper reaches may impact this species. However, the species has also been recorded foraging in marsh habitat in PSO and also the upper sections of Hoi Ha Stream (within NST, PSO and PSOHY) where the stream course is narrow but sufficiently broad to provide sheltered areas of less disturbed water.

AFCD (2013) stated that the Brown Fish Owl is a scarce resident in Hong Kong, and has been recorded at TT (in the KT enclave). This species is considered to be of Regional Conservation Concern by Fellowes *et al.* (2002).

3.6.9 Mangrove and Seashore

The closely-linked habitats of sea and mangrove are present at CK, TKP and KT. The area of mangrove habitat at each, however, is very small. Ardeids (including larger species) forage in these areas, while smaller waterbirds such as Common Kingfisher and White-breasted Waterhen are present along the coastal strip.

3.6.10 Backshore Vegetation

This habitat is similar in structure to shrubland habitat, though it supports a less abundant and diverse bird community largely confined to species common and widespread in Hong Kong.

3.6.11 Ruderal Area, Developed/ Village Area and Waste Ground

These highly man-modified habitats support a very limited community of common and widespread bird species.

3.7 Mammals

According to Shek (2007), Chinese Porcupine (*Hystrix brachyura*), Masked Palm Civet (*Paguma larvata*) and Red Muntjac (*Muntiacus muntjak*) have been recorded in the Sai Kung CP; Shek (2006) includes a photograph of a roadkill Masked Palm Civet recorded at PSO. The porcupine is considered to be of Potential Global Concern and the civet and deer of Potential Regional Concern (Fellowes *et al.* 2002). A former resident of PSO has observed the Chinese Porcupine and Red Muntjac in the woodland at PSO (Christophe Barthelemy pers. comm.). A detached quill of a Chinese Porcupine was found in the PTA enclave (Figure 13; KFBG Staff pers. obs.). Based on anecdotal reports, it appears that Chinese Porcupine is fairly common in the woodland areas of the Sai Kung Country Park.

Woodlands in the locality can be utilized by a wide range of mammal species. Indeed, the Chinese Pangolin (*Manis pentadactyla*) has also been recorded within and adjacent to these enclaves (AFCD Staff pers. comm.). The Chinese Pangolin is considered to be Globally Endangered (IUCN 2013); it is also rare and of conservation concern in Hong Kong (AFCD 2013). The Greater Short-nosed Fruit bat (*Cynopterus sphinx*) and the Himalayan Leaf-nosed bat (*Hipposideros armiger*) have a wide distribution in Hong Kong and both species have been recorded in Sai Kung. Fan palms adjacent to village areas provide roost sites for the fruit bat and the leaf-nosed bat has been found utilising old abandoned village buildings in enclaves. Although not recorded in the present survey both species are expected to be present in or adjacent to the enclaves under this study.

4. Habitats of High Conservation Importance

4.1 Watercourses and Riparian Zones

Watercourses and associated riparian zones within the enclaves are of high conservation importance, primarily because they support many species of conservation concern and the habitats are well-connected with other nearby habitats (mainly secondary woodland). As indicated earlier, several fish species of conservation importance, endangered herpetofauna species and a scarce bird (Brown Fish Owl) depend on these habitats. In the KT, TKP and CK enclaves, riparian areas (including the watercourses) provide habitats for the Sesarmino Crab community; the stream estuaries also function as fish nurseries, and provide migratory paths for diadromous species.

4.2 Woodlands

Plant species of conservation concern flourish in the woodlands (both secondary and *fung shui*) of all six enclaves, and some species of global conservation concern were recorded, such as the Incense Tree (*Aquilaria sinensis*), *Gnetum luofuense* (a woody climber), *Diospyros vaccinioides* (a shrub) and the orchid *Ludisia discolor*. The woodlands provide suitable roosting habitats for the Brown Fish Owl, and are home to wild mammals and several herpetofauna species of high conservation importance. The woodlands at KT, TKP and CK also support a Sesarmino Crab community. In conclusion, we consider that the woodlands, with their intactness and their connectivity to the surrounding CP, are of high conservation importance.

4.3 Mangroves and Backshore Vegetation

Tam and Wong (2000) considered that the mangrove stands at TT (Tai Tan, within the KT enclave), CK and TKP are of conservation concern; TT and CK are considered to be "very important" and TKP to be "important". Our findings and also data from Kwok and Tang (2005) also reflect that these habitats (mangrove and backshore vegetation) are important and key to supporting the Sesarmino Crab community. The backshore vegetation areas are ecologically linked with mangroves and other important habitats nearby (i.e. streams, woodlands); they should not be considered as of low value or low concern as they are integral to other habitats and can function as an important buffer (e.g., for the mangrove), and indeed these areas are also habitats for many important species (i.e., the Sesarmino Crabs); backshore vegetation adjacent to streams provides suitable hunting and roosting perches for Brown Fish Owls and habitat for herpetofauna of conservation importance. We thus conclude that the two habitats described here should be considered of high conservation importance, and should be protected.

4.4 Marshes and Seasonally Wet Grasslands at PSO and PTA

A locally endangered orchid species was present in the marshes at PSOHY and PTA. This species also has legal protection in Hong Kong. The marshes at PSO (those adjacent to the watercourse) are known to support the rare catfish (*Pseudobagrus trilineatus*), which can only be found in the PSO area (including NST) and at one other site in Hong Kong. Since the seasonally wet grassland can provide suitable habitat for the endangered orchid (it requires boggy, lowland grassland), we consider that both the marsh areas and seasonally wet grasslands in the PSO (including PSOHY) and PTA enclaves should be protected.

4.5 Ponds at PTA

The two ponds at PTA contain the Hong Kong Paradise Fish, which is a key fish species of conservation concern in Hong Kong (AFCD 2013). Besides protecting these ponds, we recommend that the areas surrounding (as buffer) and watercourses connected with these ponds should also be protected.

4.6 Riparian Grasslands at CK

Riparian grassland at CK forms an integral part of the Sesarmine Crab habitat (Figure 11). In order to protect the crab species, these grasslands should not be disturbed.

4.7 Pond and Associated Marsh at KT

The large fresh water pond at KT (in the south of the enclave) is not a common landscape in Hong Kong – it appears to be a natural pond. The pond and its associated marsh should be protected.

4.8 Existing Agricultural Land at PSO

The large area of agricultural land at PSO should be protected. Although it may have a lower ecological value than the original marsh, it still provides suitable habitat for wildlife. If it is paved, it will no longer be able to provide habitats for any fauna of conservation concern at the site, and the enclave will also suffer from the fragmentation effect; thus the ecological value of the land and also the whole enclave would be adversely affected.

5. Recommendation

The information in this report highlights the uniqueness of the habitats within the six reported enclaves, and the necessity to protect them from significant adverse impacts. In May 2011, the Convention on Biological Diversity (CBD) was extended to Hong Kong by the Central People's Government, and the Hong Kong Government has commenced a dialogue with Environmental NGOs, experts and Local Concern Groups regarding a strategy for the implementation of the CBD and the development of a local Biodiversity Strategy and Action Plan. With strategic guidance from the Convention, the Authorities have added pressure to safeguard the territories rich natural heritage and ensure that the mosaic of inter-related habitats and vegetated corridors are maintained. Not only the Country Parks require continued protection and high vigilance, but many lowland and coastal areas are integral parts of our rich ecosystems and should not be fragmented, encroached or destroyed.

We hope that the recommendations below will guide future decision making regarding the environment within the Sai Kung Enclaves:

1. The above areas and habitats of high conservation importance should be covered by an appropriate land zoning category that provides relevant protection such as the Conservation Area (CA) zone under the planning system. No development incompatible with surrounding areas or the natural heritage of the sites should be authorized.

From ecological and nature conservation perspectives, due to the strong ecological and functional linkages the enclaves are very much part of the Country Park system, and thus the Government should consider incorporating the enclaves, or areas of high conservation importance within enclaves into the Sai Kung Country Park.

2. The enclaves and the Sai Kung peninsular are frequented by many hikers, nature lovers and citizens wishing to escape from urban areas. Any further development within the enclaves will add pressure to the ecosystem of the Sai Kung area (e.g., potential pollution impact on nearby water bodies) and also to the road system (e.g., increased road traffic causing disturbance and fragmentation impacts on fauna). The authorities should maintain a broad and holistic view regarding any planning or changes within these enclaves.
3. Appropriate and enforceable planning control should be prioritized for all enclaves, and there should be a willingness to enforce existing conservation acts under the local conservation protection legislation wherever they are being contravened.

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Figures

Figure 1. Location of the six enclaves under the present study

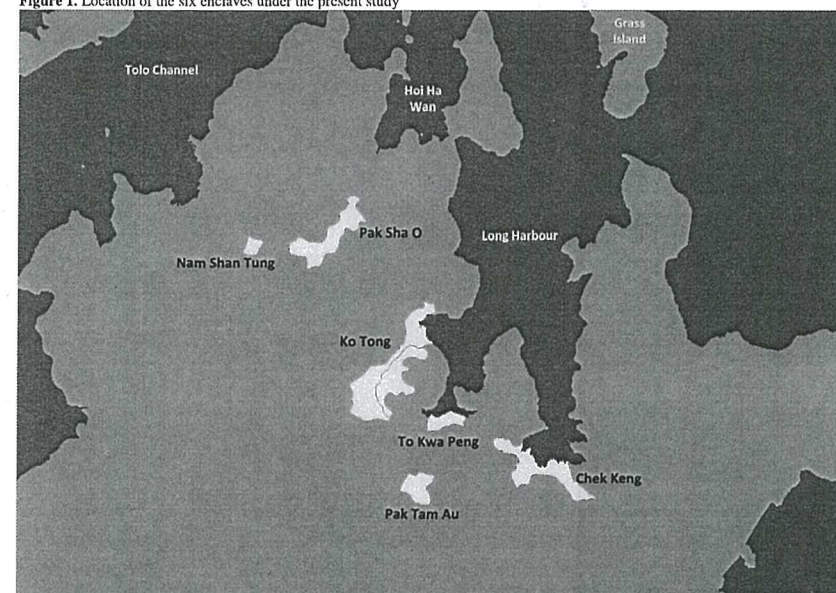


Figure 3. A natural freshwater marsh at Pak Sha O



Figure 4. The natural freshwater marsh was re-profiled into an active agricultural land during the second half of 2012



Figure 2. Habitat map of Pak Sha O and Pak Sha O Ha Yeung

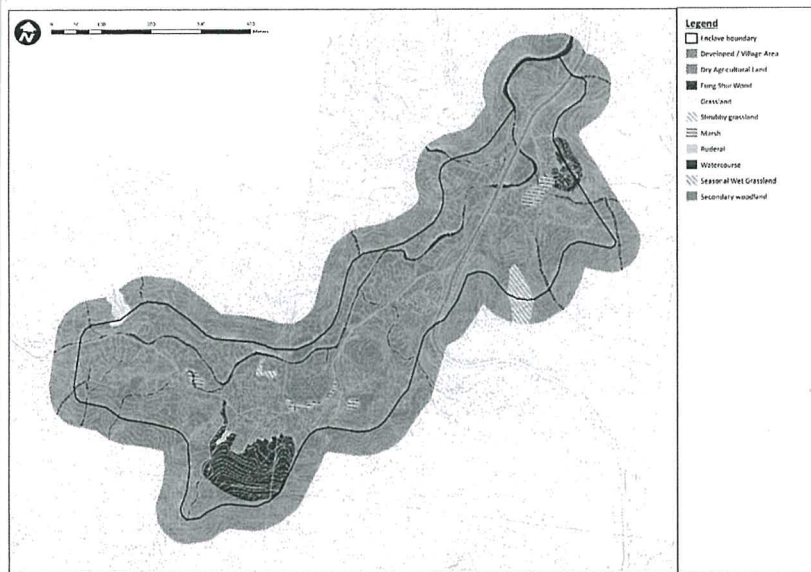


Figure 5. Habitat map of Nam Shan Tung



Figure 6. Habitat map of Pak Tam Au

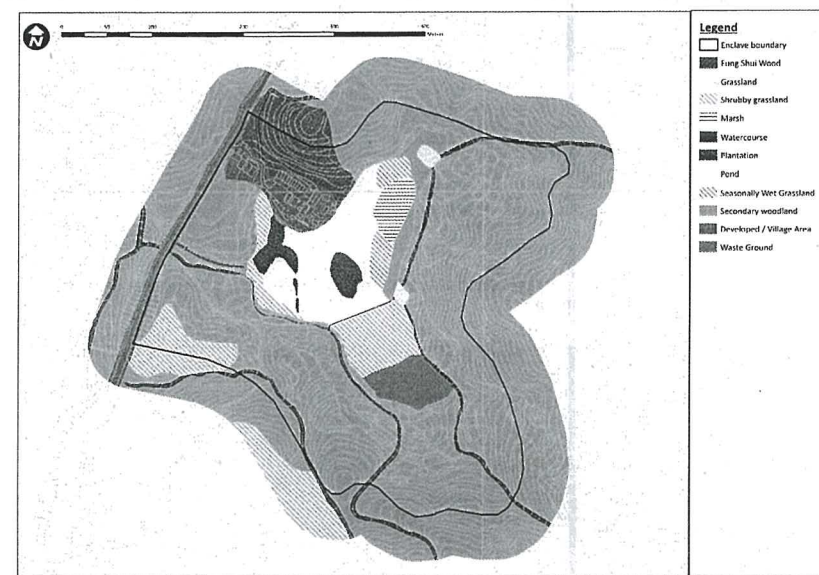


Figure 7. Habitat map of Ko Tong



Figure 8. Habitat map of To Kwa Peng

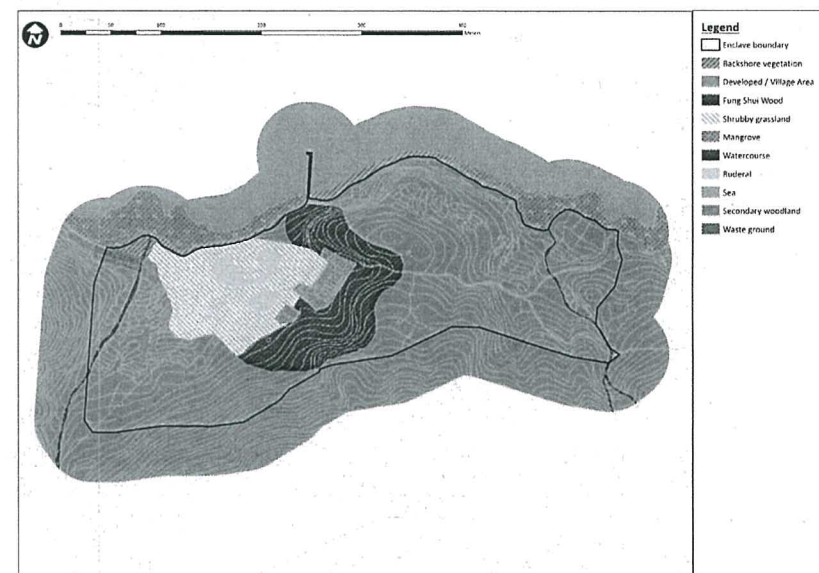


Figure 10. Juvenile fishes observed in the estuaries at Chek Keng



Figure 9. Habitat map of Chek Keng

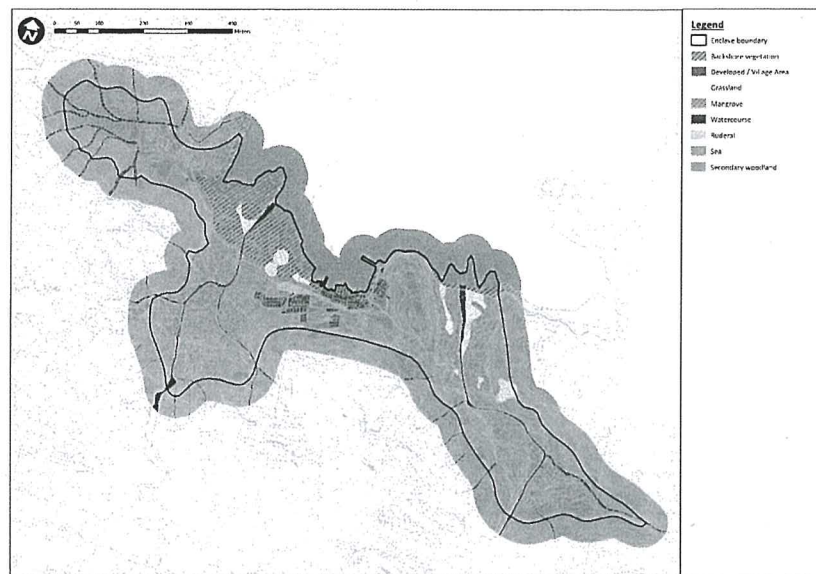


Figure 11. Sesarmino Crab burrows within the riparian zone at Chek Keng

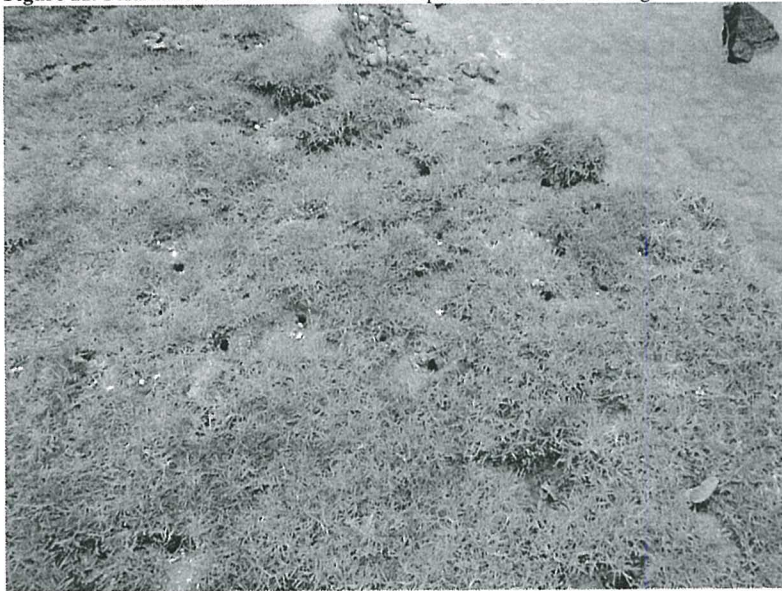


Figure 12. *Chiromantes haematocheir* – an uncommon Sesarmino Crab species in Hong Kong – recorded far from the shore of Chek Keng

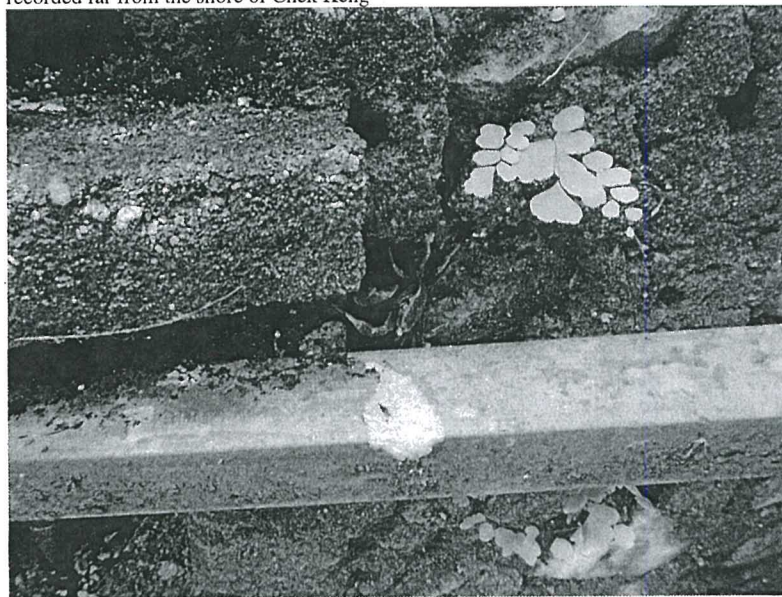


Figure 13. A detached quill of a Chinese Porcupine found in the Pak Tam Au enclave



Appendices

Appendix 1. Flora Species Recorded within Each Enclave

Table A1-1. Flora species recorded within Chek Keng enclave

Scientific Name	Chinese Common Name	Growth Form	Status and Distribution in HK ^a	Backshore Vegetation ^a	Grassland	Secondary Woodland	Natural Watercourse	Ruderal Area	Developed/Village Area	Mangrove
<i>Abutilon indicum</i>	磨盤草	Subshrub	Restricted						*	
<i>Acacia confusa</i>	台灣相思	Tree	Exotic, Common, often planted in plantation		*	*				
<i>Adiantum flabellulatum</i>	扇蕨線蕨	Herb	Very common			*	*			
<i>Adiantum malesianum</i>	南洋鐵線蕨	Herb	Common				*			
<i>Adina pilulifera</i>	水團花	Tree	Very common			**				
<i>Adinandra millettii</i>	黃瑞木	Tree	Common			*				
<i>Aegiceras corniculatum</i>	桐花樹	Shrub	Common	**						**
<i>Alangium chinense</i>	八角楓	Tree	Common			**				
<i>Alocasia macrorrhizos</i>	海芋	Herb	Very common			*			*	
<i>Alyxia sinensis</i>	念珠藤	Woody climber	Common			*				
<i>Amaranthus viridis</i>	野苋	Herb	Very common						*	
<i>Anisomeles indica</i>	廣防風	Herb	Common		*				*	
<i>Antidesma bunius</i>	五月茶、五味子	Tree	Common			**				
<i>Aporosa dioica</i>	銀柴	Tree	Very common			***				
<i>Aquilaria sinensis</i>	土沉香	Tree	Common, Protected under Cap. 586, listed as Near Threatened (NT) in the China Plant Red Data Book and is under State protection (Category II) in China (Hu <i>et al.</i> 2003), classified as Critically Endangered (CR) on the IUCN Red List			*				
<i>Archidendron clypearia</i>	猴耳環	Tree	Common			*				

Scientific Name	Chinese Common Name	Growth Form	Status and Distribution in HK ^a	Backshore Vegetation ^a	Grassland	Secondary Woodland	Natural Watercourse	Ruderal Area	Developed/Village Area	Mangrove
<i>Archidendron lucidum</i>	亮葉猴耳環	Tree	Common			*				
<i>Ardisia crenata</i>	大羅傘	Shrub	Common			**				
<i>Ardisia lindleyana</i>	山血丹	Shrub	Common			*				
<i>Ardisia quinquegona</i>	羅傘	Small tree	Very common			*				
<i>Atalantia buxifolia</i>	酒樹粉	Shrub	Common		*	*	*			
<i>Avicennia marina</i>	白骨壤	Tree	Common	*						**
<i>Axonopus compressus</i>	地毡草	Herb	Exotic, Common		**			*	*	
<i>Bambusa</i> sp.	竹屬	Bamboo	Common			*				
<i>Bauhinia glauca</i>	粉葉羊蹄甲、羊蹄甲藤	Woody climber	Very common			***				
<i>Berchemia floribunda</i>	幻兒茶	Climbing shrub	Common			*				
<i>Bidens alba</i>	白花鬼針草	Herb	Exotic, Very common			*				
<i>Blechnum orientale</i>	烏毛蕨	Herb	Very common			*	*			
<i>Bombax ceiba</i>	木棉	Tree	Exotic, Exotic, common for roadside planting						*	
<i>Bougainvillea spectabilis</i>	簕牡丹	Climbing shrub	Exotic, Common						*	
<i>Breynia fruticosa</i>	黑面神	Shrub	Very common		*	*				
<i>Bridelia tomentosa</i>	土蜜樹	Tree	Very common		*	*				
<i>Brucea javanica</i>	鴉膽子、苦參子	Shrub or tree	Common		*	*				
<i>Caesalpinia crista</i>	假老虎標	Woody climber	Very common			*				
<i>Caesalpinia vernalis</i>	森響實	Woody climber	streamside, lowland, common		**					

Ecological and Conservation Importance of Six Sai Kung Country Park Enclaves

Scientific Name	Chinese Common Name	Growth Form	Status and Distribution in HK ^a	Backshore Vegetation ^b	Grassland	Secondary Woodland	Natural Watercourse	Ruderal Area	Developed / Village Area	Mangrove
<i>Callicarpa kochiana</i>	枇杷紫紫珠	Shrub	Common		*	*				
<i>Canavalia lineata</i>	狹刀豆	Climber	Common			*				
<i>Carallia brachiata</i>	竹節樹	Tree	Common			*				
<i>Carica papaya</i>	番木瓜	Tree	Exotic, Cultivated for food						*	
<i>Cassytha filiformis</i>	無根藤	Parasitic climber	Very common			*				
<i>Casuarina equisetifolia</i>	木麻黃	Tree	Exotic, Often planted in plantation and along roadside, apparently semi-naturalized in the nature			*				
<i>Celtis sinensis</i>	朴樹	Tree	Common			*			*	
<i>Centella asiatica</i>	前大碗	Herb	Very common			*				
<i>Centotheca lappacea</i>	假淡竹葉	Herb	Common			*				
<i>Cerbera manghas</i>	海芒果	Tree	Common	***	*	**	**			
<i>Cheilosoria tenuifolia</i>	薄葉碎米蕨	Herb	Common			*	*			
<i>Chloris barbata</i>	孟仁草	Herb	Very common		*					
<i>Chrysopogon aciculatus</i>	竹節草、假雀麥	Herb	Very common		***					
<i>Cinnamomum parthenoxylon</i>	黃樟	Tree	Common			**				
<i>Citrus maxima</i>	柚	Tree	Exotic, Cultivated for food					*		
<i>Citrus reticulata</i>	桔	Small tree	Common						*	
<i>Clausena lansium</i>	黃皮	Tree	Exotic, Commonly planted for fruit						*	
<i>Cleistocalyx nervosum</i>	水翁	Tree	Common				***			
<i>Clerodendranthus spicatus</i>	腎茶、貓鬚草	Herb	Exotic, Common						*	

Ecological and Conservation Importance of Six Sai Kung Country Park Enclaves

Scientific Name	Chinese Common Name	Growth Form	Status and Distribution in HK ^a	Backshore Vegetation ^b	Grassland	Secondary Woodland	Natural Watercourse	Ruderal Area	Developed / Village Area	Mangrove
<i>Clerodendrum inerme</i>	苦郎樹、假紫荊	Shrub	Common		*					
<i>Cocculus orbiculatus</i>	木防己	Climber	Common			*				
<i>Cratoxylum cochinchinense</i>	黃牛木	Tree	Very common			**	*			
<i>Crinum asiaticum</i> var. <i>sinicum</i>	文殊蘭	Herb	Restricted		*	*				
<i>Cuscuta chinensis</i>	菟絲子	Parasitic herbaceous climber	Common			*				
<i>Cyclea hypoglauca</i>	粉葉輪環藤	Climber	Common			*				
<i>Cyclosorus interruptus</i>	間斷毛蕨	Herb	Common			**				
<i>Cyclosorus parasiticus</i>	華帶毛蕨	Herb	Very common			*				
<i>Cynodon dactylon</i>	狗牙根	Herb	Very common		*				*	
<i>Cyrtococcus patens</i>	弓果黍	Herb	Very common		**	*				
<i>Dalbergia benthamii</i>	兩廣黃檀	Woody climber	Common			**				
<i>Dalbergia millettii</i>	香港黃檀	Woody climber	Common			*				
<i>Daphniphyllum calycinum</i>	牛耳楓	Tree	Common		*	*	*	*		
<i>Daphniphyllum oldhamii</i>	交讓木	Tree	Common			*				
<i>Dendrotrophe varians</i>	寄生藤	Parasitic	Very common			*				
<i>Desmodium triflorum</i>	三點金	Herb	Very common		*					

Scientific Name	Chinese Common Name	Growth Form	Status and Distribution in HK ^a	Backshore Vegetation ^a	Grassland	Secondary Woodland	Natural Watercourse	Ruderal Area	Developed / Village Area	Mangrove
<i>Desmos chinensis</i>	假鷹爪	Woody climber	Common		**	*				
<i>Dicranopteris pectinata</i>	芒萁	Herb	Very common		**					
<i>Dimocarpus longan</i>	龍眼, 桂圓	Tree	Exotic, Restricted		*				*	
<i>Diospyros aurisiana</i>	雞浮柿	Tree	Very common		*					
<i>Diospyros acinoides</i>	小果柿	Shrub	Very common, regarded as "Critically Endangered" according to IUCN Red List		**	*				
<i>Diploclista laevis</i>	蒼白秤鉤風, 防己	Woody climber	Common		*	*				
<i>Diospyros dubia</i>	狗牙桑	Shrub or tree	Common		*					
<i>Elaeagnus laurifolia</i>	雞柏紫藤, 羅氏胡屈子	Woody climber	Common		*					
<i>Elaeagnus hirsuta</i>	中華杜英, 野杜英	Tree	Common		*					
<i>Elephantopus scaber</i>	地盤草	Herb	Common	**	*	*				
<i>Embelia lacta</i>	酸藤子	Woody climber	Very common		*					
<i>Embelia vestita</i>	密齒酸藤子	Woody climber	Common		*					
<i>Erigeron annuus</i>	一點紅	Herb	Very common		*				*	
<i>Eurya nitida</i>	細齒葉柃	Shrub	Very common		*					
<i>Excoecaria agallocha</i>	海漆	Tree	Common	**	*					**
<i>Ficus hirta</i>	粗葉榕	Shrub	Common		*					
<i>Ficus hispida</i>	野葉榕	Tree	Very common		*	*				
<i>Ficus microcarpa</i>	細葉榕	Tree	Common						*	

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<i>Ficus pumila</i>	薔荔	Climber	Very common		*				*	
<i>Ficus tinctoria</i> subsp. <i>Gibbosa</i>	斜葉榕	Tree	Restricted		*					
<i>Ficus variegata</i> var. <i>chlorocarpa</i>	青果榕	Tree	Common		*				*	
<i>Ficus variolosa</i>	變葉榕	Shrub or tree	Very common		*					
<i>Fimbristylis</i> sp.	飄拂草屬	Herb	Restricted		*					
<i>Gahnia tristic</i>	黑莎草	Herb	Very common		**					
<i>Garcinia oblongifolia</i>	黃牙果	Tree	Very common		*					
<i>Glochidion eriocarpum</i>	毛果算盤子	Tree	Very common		*	*				
<i>Glochidion lanceolatum</i>	艾羅算盤子, 大葉算盤子	Shrub	Common		*	*				
<i>Glochidion zeylanicum</i>	香港算盤子	Shrub	Common		***					
<i>Gnetum luofuense</i>	藤浮買藤藤	Climber	Very common, regarded as "Near Threatened" according to IUCN Red List		*					
<i>Gnetum parvifolium</i>	小葉買藤藤	Climber	Very common		*					
<i>Gymnanthera oblonga</i>	海島藤	Slender woody climber	Regarded as Very Rare in Xing <i>et al.</i> (2000), common in several districts in HK including Sai Kung, Tsing Yi, Yuen Long and Lantau Island (AFCD 2009)	**			***			**
<i>Hedyotis acutangula</i>	方骨草	Herb	Very common		*					
<i>Heritiera littoralis</i>	銀葉樹	Tree	Restricted	**						**
<i>Heterosmilax japonica</i>	尚菰莢	Climber	Common		*					
<i>Hibiscus tiliaceus</i>	黃槿	Tree	Common	***	*	*	**			*

Ecological and Conservation Importance of Six Sai Kung Country Park Enclaves

Scientific Name	Chinese Common Name	Growth Form	Status and Distribution in HK^	Mangrove	Developed / Village Area	Ruderal Area	Natural Watercourse	Secondary Woodland	Grassland	Backshore Vegetation
<i>Homalium cochinchinense</i>	大料木	Shrub or tree	Common				**			
<i>Ilex asprella</i>	梅葉冬青	Shrub	Very common		*	*				
<i>Ilex pubescens</i>	毛冬青	Shrub	Very common			***				
<i>Ipomoea cairica</i>	五爪金龍	Herbaceous climber	Exotic, Very common			*				
<i>Isachne globosa</i>	柳葉荳	Herb	Very common							*
<i>Ixora chinensis</i>	龍船花	Shrub	Restricted							*
<i>Kalanchoe pinnata</i>	落地生根	Herb	Exotic, Common			*				*
<i>Kandelia obovata</i>	水筆仔	Tree	Very common	**						****
<i>Lantana camara</i>	馬纓丹	Shrub	Exotic, Very common	**	*	*	*	*	*	*
<i>Leptaphyllum microphyllum</i>	伏石蕨	Herb	Common			*				
<i>Ligustrum sinense</i>	山指甲	Shrub or small tree	Common				*	*		
<i>Limnium sinense</i>	補血草	Herb	Common	*	*					
<i>Lindernia crustacea</i>	母草	Herb	Restricted		*					
<i>Lindsaea orbiculata</i>	圓葉鱗始蕨	Herb	Very common			*				
<i>Liriope spicata</i>	山麥冬, 麥門冬	Herb	Very common			*				
<i>Litchi chinensis</i>	荔枝	Tree	Exotic, Restricted							*
<i>Litsea cubeba</i>	木薑子	Tree	Common			*				
<i>Litsea glutinosa</i>	蒜頭樹	Tree	Very common			*	*			
<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	豺皮樟	Tree	Very common			*				

Ecological and Conservation Importance of Six Sai Kung Country Park Enclaves

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<i>Lophatherum gracile</i>	淡竹葉	Herb	Very common			*				
<i>Lygodium flexuosum</i>	曲軸海金沙	Climber	Very common			*				
<i>Lygodium japonicum</i>	海金沙	Climber	Very common	*		*	*	*	*	*
<i>Lygodium scandens</i>	小葉海金沙	Climber	Common			*				
<i>Macaranga tanarius</i> var. <i>tomentosa</i>	血桐	Tree	Common			*				*
<i>Machilus chekiangensis</i>	浙江潤楠	Tree	Very common			**				
<i>Machilus velutina</i>	絨毛潤楠	Tree	Common			**				
<i>Maesa perularius</i>	鯽魚藤	Shrub	Common		*	*				*
<i>Mallotus paniculatus</i>	白楸	Tree	Very common		*	**				
<i>Melastoma malabathricum</i>	野牡丹	Shrub	Common		*	*				
<i>Melastoma sanguineum</i>	毛蕊	Shrub	Common			*				
<i>Melicope pteleifolia</i>	三椏苦	Tree	Common			*				
<i>Melodinus suaveolens</i>	山欖	Woody climber	Common			*				
<i>Mikania micrantha</i>	藜甘菊	Herbaceous climber	Exotic, Very common		*			****	*	
<i>Milletia nitida</i>	亮葉雞血藤	Woody climber	Very common			*				
<i>Miscanthus floridulus</i>	五節芒	Herb	Common			*				
<i>Mussaenda pubescens</i>	朱紫金花	Climbing shrub	Very common			*	*			

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<i>Oxalis corniculata</i>	酢漿草	Herb	Very common	*	*					
<i>Taderia scandens</i>	龜欠葛	Climber	Very common	*	*					
<i>Calandrinia cernua</i>	鋪地蜈蚣、地龍草	Creeping herb	Very common		*					
<i>Alnus amosissimus</i>	馬甲子	Tree	Common	****	**	**	**			*
<i>Andropogon australis</i>	露兜草	Herb	Common				**			
<i>Andropogon tectorius</i>	露兜樹	Small tree	Very common	**	*					
<i>Anicum revifolium</i>	短葉黍	Herb	Very common						*	
<i>Aspalathus angustata</i>	兩耳草	Herb	Exotic, Common	**						
<i>Aspalathus distichum</i>	雙穗雀稗	Herb	Common	*						
<i>Avicula hongkongensis</i>	香港大沙葉	Shrub or small tree	Common, Protected under Cap. 96A			**				
<i>Crilla frutescens</i>	紫蘇	Herb	Restricted	*						
<i>Phoenix loureirae</i>	刺葵	Shrub or small tree	Common	*						
<i>Hybanthus schinchenensis</i>	越南葉下珠	Shrub	Very common			*				
<i>Hybanthus emblica</i>	酸甘子、油甘子	Tree	Very common			*	*			
<i>Hydrocotyle dichellum</i>	排錢草	Shrub	Very common	*		*				
<i>Ipomoea cathayana</i>	青葙	Climber	Restricted		*					
<i>Lycium indica</i>	圓莢茄、爛肉	Shrub	Common	*						

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<i>Praxelis clematidea</i>	假臭草	Herb	Exotic, Very common	*	*					
<i>Psidium guajava</i>	番石榴	Tree	Exotic, Common		*				*	
<i>Psychotria asiatica</i>	九節	Shrub	Very common	*	***	**				
<i>Pteris semipinnata</i>	半邊旗	Herb	Very common		*					
<i>Pteris vittata</i>	蜈蚣草	Herb	Very common		*					
<i>Pueraria lobata</i>	野葛	Climber	Very common		*	*				
<i>Pycreus polystachyus</i>	多穗扁莎	Herb	Very common	*						
<i>Raphirolepis indica</i>	車輪梅	Shrub or small tree	Very common		*					
<i>Rhapiz excelsa</i>	棕竹	Shrub	Common		**					
<i>Rhodomyrtus tomentosa</i>	桃金娘	Shrub	Very common	*	**					
<i>Rhus chinensis</i>	蠟樹木	Tree	Common			*				
<i>Rhus hypoleuca</i>	白背蠟樹木	Tree	Common	**	*	**				
<i>Rhus succedanea</i>	野漆樹	Tree	Common		*	*				
<i>Rosa laevigata</i>	金櫻子	Climbing shrub	Common		*					
<i>Rourea microphylla</i>	小葉紅葉藤、紅葉藤	Woody climber	Common		*	*				
<i>Rubus reflexus</i>	蛇泡藤	Climbing shrub	Very common		*					
<i>Ruellia coerulea</i>	蘭花草	Herb	Exotic, Common						*	
<i>Sageretia thea</i>	雀梅藤	Shrub	Common	**	*	*			*	
<i>Sapium discolor</i>	山烏桕	Tree	Very common		*					
<i>Sapium sebiferum</i>	烏桕	Tree	Common	*	*					
<i>Sarcandra glabra</i>	草珊瑚	Subshrub	Common		*					

Ecological and Conservation Importance of Six Sai Kung Country Park Enclaves

Scientific Name	Chinese Common Name	Growth Form	Status and Distribution in HK ^a	Backshore Vegetation	Grassland	Secondary Woodland	Natural Watercourse	Ruderal Area	Developed / Village Area	Mangrove
<i>Schefflera heptaphylla</i>	鴨腳木	Tree	Very common			***	*			
<i>Schizostachyum dumetorum</i>	苗竹仔	Bamboo	Very common				**			
<i>Scolopia chinensis</i>	刺棒	Tree	Common			**	*			
<i>Scolopia saeva</i>	廣東刺棒	Tree	Common			*				
<i>Scoparia dulcis</i>	野甘草、冰糖草	Herb	Common			*				
<i>Selaginella doederleinii</i>	深綠卷柏	Herb	Common			*				
<i>Selaginella uncinata</i>	髮絲草	Herb	Common						*	
<i>Senna occidentalis</i>	豨江南、野扁豆	Shrub	Very common		*					
<i>Smilax china</i>	金剛藤	Climbing shrub	Very common			*				
<i>Smilax glabra</i>	土茯苓、光葉菝葜	Climbing shrub	Very common			*				
<i>Smilax lanceifolia</i> var. <i>opaca</i>	暗色菝葜	Climbing shrub	Common			*	*			
<i>Solanum capsicaoides</i>	牛茄子、颠茄	Herb	Exotic, Regarded as Rare in Xing <i>et al.</i> (2000), widely established in HK in recent years			*			*	
<i>Spermacoce stricta</i>	豐花草	Herb	Restricted						*	
<i>Stachytarpheta jamaicensis</i>	假馬鞭	Herb	Exotic, Common		*					
<i>Stephania longa</i>	千金藤	Climber	Common		*			*	*	
<i>Sterculia lanceolata</i>	假楨婆	Tree	Very common			*				
<i>Strophanthus divaricatus</i>	羊角拗	Woody climber	Common		*	*	*			

Ecological and Conservation Importance of Six Sai Kung Country Park Enclaves

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<i>Strychnos angustiflora</i>	牛眼馬錢	Woody climber	Common			*				
<i>Styrax suberifolius</i>	格藍安息香、紅皮	Tree	Common			*				
<i>Suaeda australis</i>	南方鹼蓬	Herb	Common	*						
<i>Symplocos cochinchinensis</i> var. <i>laurina</i>	黃牛奶樹	Tree	Common		**	*				
<i>Symplocos crassifolia</i>	厚葉山礬、厚葉灰木	Tree	Common			*				
<i>Symplocos lancifolia</i>	光葉山礬	Tree	Common			*				
<i>Syzygium buxifolium</i>	赤楠	Shrub	Common			*				
<i>Syzygium hancei</i>	韓氏蒲桃、紅鱗蒲桃	Tree	Common			*	*			
<i>Syzygium jambus</i>	蒲桃	Tree	Exotic, Common		*	*	*			
<i>Syzygium levisnei</i>	山蒲桃	Tree	Common			**				
<i>Tetracera asiatica</i>	錫葉藤	Woody climber	Very common			*	*			
<i>Toxicarpus wightianus</i>	弓果藤	Slender woody climber	Very common			*				
<i>Triumfetta rhomboides</i>	刺勒麻	Subshrub	Common						*	
<i>Tylophora ovata</i>	娃兒藤	Slender woody climber	Common			*				
<i>Urena lobata</i>	尚覺天花	Subshrub	Common		*					
<i>Urena procumbens</i>	梵天花	Subshrub	Common		*	*		*		
<i>Uvaria macrophylla</i>	紫玉盤	Woody climber	Common			*				

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<i>ernonia cinerea</i>	夜香牛	Herb	Very common		*					
<i>iburnum</i>	珊瑚樹	Tree	Very common		*	*	***	*		
<i>iola diffusa</i>	蔓草葉	Herb	Common				*			
<i>lex rotundifolia</i>	白荷葉前	Shrub	Exotic, Common	**	*					
<i>edelia trilobata</i>	三裂葉綠蟻菊	Herb	Exotic, Common				*	*		
<i>ikstroemia indica</i>	丁哥王	Shrub	Common			**				
<i>ikstroemia nutans</i>	細軸鈴花	Shrub	Common			**				
<i>ungia japonica</i>	黃荊菜	Herb	Very common			*				
<i>anthoxylum lanthoides</i>	樟葉花椒	Tree	Regarded as Rare in Xing <i>et al.</i> (2000), restricted to several locations in HK such as Chek Keng and Tai Long Sai Wan according to AFCD 2008		*				*	
<i>anthoxylum ricenae</i>	雞楸花椒	Tree	Common			*				
<i>anthoxylum fidum</i>	兩面針	Climbing shrub	Very common			*				
<i>anthoxylum undens</i>	花椒鞭	Climbing shrub	Common			*				
<i>anthium barometz</i>	金毛狗	Herb	Very common, Protected under Cap. 586, listed as Vulnerable (VU) in the China Red Data Book and is under State protection (category II) in China (Hu <i>et al.</i> 2003)			*				
total			226	16	60	164	42	10	39	8

[^] Status follows Xing *et al.* (2000)

^a Code for Abundance: **** = Abundant, *** = Frequent, ** = Occasional, * = Scarce

Table A1-2. Flora species recorded within Ko Tong enclave

Scientific Name	Chinese Common Name	Growth Form	Status and Distribution in HK [^]	Backshore Vegetation ^a	Dry Agricultural Land	Ko Tong Fung Shui Woodland	Ko Tong Fung Shui Woodland	Mangrove	Marsh	Secondary Woodland	Natural Watercourse	Pond	Ruderal Area	Seasonally Wet Grassland	Shrubby Grassland	Developed / Village Area
<i>Acacia confusa</i>	台灣相思	Tree	Exotic, Common, often planted in plantation													*
<i>Adiantum flabellulatum</i>	扇葉鐵線蕨	Herb	Very common		*											
<i>Adina pilulifera</i>	水團花	Tree	Very common								*					
<i>Aegiceras corniculatum</i>	桐花樹	Shrub	Common	**				***								
<i>Alungium chinense</i>	八角楓	Tree	Common						***							*
<i>Alocasia macrorrhizas</i>	海芋	Herb	Very common		*					*	*					
<i>Alpinia hainanensis</i>	草豆蔻	Herb	Very common		*					**						
<i>Alpinia stachyodes</i>	密苞山薑	Herb	Common						*							
<i>Ampelopsis cantoniensis</i>	廣東蛇葡萄	Climber	Very common						*							
<i>Anisomeles indica</i>	廣防風	Herb	Common						*						*	
<i>Annona squamosa</i>	番荔枝	Tree	Common											*		
<i>Antidesma bunius</i>	五月茶、五味子	Tree	Common		*	*			**							*
<i>Aporosa dioica</i>	銀柴	Tree	Very common	*		***			**		*		*	*	*	*
<i>Aquilaria sinensis</i>	土沉香	Tree	Common, Protected under Cap. 586, listed as Near Threatened (NT) in the China Plant Red Data Book and is under State protection (Category II) in China (Hu <i>et al.</i> 2003), classified as Critically Endangered (CR) on the IUCN Red List							**						*
<i>Archidendron lucidum</i>	亮葉猴耳環	Tree	Common		*				*							

Scientific Name	Chinese Common Name	Growth Form	Status and Distribution in HK ^a	Backshore Vegetation	Coastal Scrub	Mangrove	Ko Tong Ha Yeung Pine Shrub Woodland	Ko Tong Ping Shui Woodland	Dry Agricultural Land	Backshore Vegetation	Developed / Village Area	Shrubby Grassland	Seasonally Wet Grassland	Ruderal Area	Pond	Natural Watercourse	Secondary Woodland	Marsh
<i>Archontophoenix alexandrae</i>	假檳榔	Tree	Exotic. Commonly planted for greening								*							
<i>Ardisia crenata</i>	大羅傘	Shrub	Common			*								*				
<i>Ardisia quinqueгона</i>	羅傘	Small tree	Very common			*								**				
<i>Atalantia buxifolia</i>	酒醉筋	Shrub	Common															
<i>Avicennia marina</i>	白骨壤	Tree	Common					**										
<i>Axonopus compressus</i>	地毡草	Herb	Exotic. Common												***			
<i>Bauhinia glauca</i>	粉紫羊蹄甲、羊蹄甲藤	Woody climber	Very common			**	*					*	***					****
<i>Berchemia floribunda</i>	勾兒茶	Climbing shrub	Common													*		
<i>Bischofia javanica</i>	秋楓	Tree	Common													*		
<i>Blechnum orientale</i>	烏毛蕨	Herb	Very common			**												
<i>Breynia fruticosa</i>	黑面神	Shrub	Very common											*				
<i>Bridelia tomentosa</i>	土蜜樹	Tree	Very common											*				
<i>Brucea javanica</i>	鴉膽子、苦參子	Shrub or tree	Common	*										**				
<i>Bruguiera gymnorhiza</i>	木萵	Tree	Restricted			**												
<i>Byttneria aspera</i>	刺果藤	Woody climber	Very common		***	***								*				
<i>Callicarpa kochiana</i>	牻牛儿苗紫珠	Shrub	Common															*
<i>Cardiospermum halicacabum</i>	倒地鈴	Climber	Restricted										*					
<i>Carica papaya</i>	番木瓜	Tree	Exotic. Cultivated for food	*														
<i>Castanopsis fissa</i>	雷朝雞	Tree	Common												*			*

Scientific Name	Chinese Common Name	Growth Form	Status and Distribution in HK ^a	Backshore Vegetation	Dry Agricultural Land	Woodland	Ko Tong Ping Shui	Ko Tong Ping Shui Woodland	Ko Tong Ping Shui Woodland	Manch	Secondary Woodland	Natural Watercourse	Zone	Ruderal Area	Seasonally Wet Grassland	Shrubby Grassland	Developed / Village Area
<i>Cerbera manghas</i>	海芒果	Tree	Common	*				*									
<i>Chlorospondias axillaris</i>	南酸枣	Tree	Common						*								
<i>Cinnamomum camphora</i>	樟	Tree	Common				**										*
<i>Cinnamomum parthenoxylon</i>	黄樟	Tree	Common			**					**		**	*			
<i>Citrus maxima</i>	柚	Tree	Exotic. Cultivated for food	*													
<i>Citrus reticulata</i>	桔	Small tree	Common	**													
<i>Citrus sinensis</i>	橙	Tree	Cultivated for food	*													
<i>Clauseana lansium</i>	黄皮	Tree	Exotic. Commonly planted for fruit					*									
<i>Cleistanthus nervosus</i>	水翁	Tree	Common	**				*			*	**					
<i>Clerodendrum inerme</i>	苦郎树 / 假紫莉	Shrub	Common	*				*									
<i>Cocculus orbiculatus</i>	木防己	Climber	Common								*						
<i>Colocasia esculenta</i>	芋	Herb	Cultivated							*							
<i>Commelina diffusa</i>	酢酢草	Herb	Common							**							
<i>Cratogeomys rufinervis</i>	黄牛木	Tree	Very common		**	*				**				*		*	*
<i>Cyclosorus interruptus</i>	间断毛蕨	Herb	Common					**				*					
<i>Cyclosorus parasiticus</i>	华南毛蕨	Herb	Very common	*					*								
<i>Cyperus compressus</i>	扁穗莎草	Herb	Very common					*									
<i>Cyperus pilosus</i>	毛穗莎草	Herb	Common					*			*				*		
<i>Cyrtococcum patens</i>	弓果蕨	Herb	Very common						**	*			**	*			
<i>Dalbergia benthamii</i>	两广黄檀	Woody climber	Common	*							**			*			

Scientific Name	Chinese Common Name	Growth Form	Status and Distribution in HK^	Developed / Village Area	Shrubby Grassland	Seasonally Wet Grassland	Ruderal Area	Pond	Natural Watercourse	Secondary Woodland	Marsh	Mangrove	Ko Tong Ha Yeung Fung Shui Woodland	Ko Tong Fung Shui Woodland	Dry Agricultural Land	Backshore Vegetation
<i>Platanus orientalis</i>	牛耳楓	Tree	Common							**						
<i>Lonix regia</i>	鳳凰木, 金麻	Tree	Exotic, Common			*										
<i>Smilax chinensis</i>	假葛瓜	Woody climber	Common			*				**						
<i>Cratogeomys pedata</i>	芒莪	Herb	Very common							*						
<i>Albizia leucacarpa</i>	龍眼, 桂圓	Tree	Exotic, Restricted			*	**		*							
<i>Osbeckia bulbifera</i>	黃芎	Climber	Common			*										
<i>Albizia leucacarpa</i>	雞柏紫藤, 羅氏胡 桐子	Woody climber	Common			*										
<i>Albizia laeta</i>	酸藤子	Woody climber	Very common						*							
<i>Albizia vestita</i>	密齒酸藤子	Woody climber	Common						*							
<i>Locaulon truncatum</i>	菲律賓穀精草	Herb	Common				*									
<i>Eucalyptus robusta</i>	大葉桉, 大葉有加利	Tree	Exotic, Common, often planted in plantation												*	
<i>Eucalyptus agallocha</i>	海漆	Tree	Common	*								***				
<i>Ficus hispida</i>	對葉榕	Tree	Very common						**							
<i>Ficus microcarpa</i>	細葉榕	Tree	Common			*									*	
<i>Ficus subpinnatifida</i>	筆管榕	Tree	Common	*			*	*								
<i>Ficus variegata</i> var. <i>obovata</i>	青果榕	Tree	Common						*							
<i>Phytolacca frutescens</i>	點點楓	Herb	Restricted						*							
<i>Phytolacca frutescens</i>	錦繡楓	Herb	Common						*							
<i>Phytolacca scandens</i>	聚花草	Herb	Common						**							

Scientific Name	Chinese Common Name	Growth Form	Status and Distribution in HK^	Developed / Village Area	Shrubby Grassland	Seasonally Wet Grassland	Ruderal Area	Pond	Natural Watercourse	Secondary Woodland	Marsh	Mangrove	Ko Tong Ha Yeung Fung Shui Woodland	Ko Tong Fung Shui Woodland	Dry Agricultural Land	Backshore Vegetation
<i>Freycinetia umbellata</i>	笑蘭草	Herb	Common								*					
<i>Geissaspis cristata</i>	雞豆	Herb	Regarded as Rare in Xing <i>et al.</i> (2000), restricted to several locations including Deep Water Bay, Tai Mong Tsai, Sai Keng and Lantau Island according to AFCD 2008								**					
<i>Gluchidion eriocarpum</i>	毛果葛藤子	Tree	Very common							**					*	*
<i>Gluchidion zeylanicum</i>	香港葛藤子	Shrub	Common						*	*					***	*
<i>Gnetum luofuense</i>	羅浮翼藤	Climber	Very common, regarded as "Near Threatened" according to IUCN Red List									*	**			
<i>Gymnanthera oblonga</i>	海島藤	Slender woody climber	Regarded as Very Rare in Xing <i>et al.</i> (2000), common in several districts in HK including Sai Kung, Tsing Yi, Yuen Long and Lantau Island (AFCD 2009)	**					*							
<i>Hedyotis coronarium</i>	簕花	Herb	Exotic, Common	*												
<i>Heterosmilax japonica</i>	黃葛藤	Climber	Common		*				*							
<i>Hibiscus tiliaceus</i>	黃槿	Tree	Common	***				**		**						
<i>Hypericum japonicum</i>	地耳草	Herb	Very common				*		*						*	
<i>Ilex asprella</i>	梅葉冬青	Shrub	Very common					*								
<i>Impatiens chinensis</i>	鄧鳳仙	Herb	Common					**								
<i>Ipomoea batatas</i>	番薯	Herbaceous climber	Exotic, Cultivated	**												
<i>Ipomoea triloba</i>	三裂葉薯	Herbaceous climber	Exotic, Common						**							

Ecological and Conservation Importance of Six Sai Kung Country Park Enclaves

Scientific Name	Chinese Common Name	Growth Form	Status and Distribution in HK ^a	Backshore Vegetation	Marsh	Secondary Woodland	Natural Watercourse	Pond	Ruderal Area	Seasonally Wet Grassland	Shrubby Grassland	Developed / Village Area
<i>Ischaemum barbatum</i>	粗毛鴨嘴草	Herb	Very common		***			**				
<i>Ischaemum ciliare</i>	細毛鴨嘴草	Herb	Very common		**							
<i>Kalanchoe pinnata</i>	落地生根	Herb	Exotic, Common	*							*	
<i>Kandelia obovata</i>	水筆仔	Tree	Very common		***							
<i>Kyllinga nemoralis</i>	單穗水蜈蚣	Herb	Very common		*						*	
<i>Kyllinga polyphylla</i>	香根水蜈蚣	Herb	Exotic, Common						*			
<i>Lantana camara</i>	馬纓丹	Shrub	Exotic, Very common	*	*	*	*	**		***	*	
<i>Ligustrum sinense</i>	山指甲	Shrub or small tree	Common			*						
<i>Lindernia crustacea</i>	母草	Herb	Restricted						*			
<i>Lindernia oblonga</i>	梭耳母草	Herb	Restricted		*							
<i>Lindernia rotundifolia</i>	迷你虎耳草	Herb	Restricted						*			
<i>Lipocarpha chinensis</i>	華湖瓜草	Herb	Restricted		*							
<i>Liriope spicata</i>	山麥冬、麥門冬	Herb	Very common			*						
<i>Litchi chinensis</i>	荔枝	Tree	Exotic, Restricted	*	*							
<i>Lithocarpus glaber</i>	柯、石櫟	Tree	Common			**						
<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	封皮樟	Tree	Very common			*						
<i>Lophatherum gracile</i>	淡竹葉	Herb	Very common		*							
<i>Lophostemon confertus</i>	紅膠木	Tree	Exotic, Commonly planted			*					*	
<i>Ludwigia hyssopifolia</i>	草龍	Herb	Common						*			
<i>Ludwigia octovalvis</i>	毛草龍	Herb	Common		*							



Ecological and Conservation Importance of Six Sai Kung Country Park Enclaves

Scientific Name	Chinese Common Name	Growth Form	Status and Distribution in HK ^a	Backshore Vegetation	Dry Agricultural Land	Ko Tong Fung Shui Woodland	Ko Tong Ha Yeung Fung Shui Woodland	Marsh	Secondary Woodland	Natural Watercourse	Pond	Ruderal Area	Seasonally Wet Grassland	Shrubby Grassland	Developed / Village Area
<i>Lygodium japonicum</i>	海金沙	Climber	Very common	*	**				*	*	*		*	*	*
<i>Lygodium scandens</i>	小葉海金沙	Climber	Common					*	*	*	*				
<i>Macaranga tanarius</i> var. <i>tomentosa</i>	血桐	Tree	Common						*			*		*	
<i>Machilus chekiangensis</i>	浙江潤楠	Tree	Very common		**				***					*	
<i>Maesa perlaris</i>	鯽魚藤	Shrub	Common	*	**			*	**					*	
<i>Mallotus paniculatus</i>	白楸	Tree	Very common			**			***	*	**				
<i>Mangifera indica</i>	芒果	Tree	Exotic, Commonly planted for fruit			*									
<i>Melaleuca quinquevneria</i>	白千層	Tree	Exotic, Commonly used for slope plantation											*	
<i>Melastoma malabathricum</i>	野牡丹	Shrub	Common	*				**	*		***		**	**	*
<i>Melicope pteleifolia</i>	三椏苔	Tree	Common						*						
<i>Microcos nervosa</i>	波布菜、布波菜	Tree	Common	*	*				*						
<i>Microstegium ciliatum</i>	剛莠竹	Herb	Very common					**							
<i>Mikania micrantha</i>	微甘菊	Herbaceous climber	Exotic, Very common	**				***	**	***	*	*	*	*	*
<i>Mimosa pudica</i>	含羞草	Herb	Exotic, Very common									*	*	***	
<i>Morus alba</i>	桑	Tree	Common						*						
<i>Murdannia nudiflora</i>	擺花水竹蓐	Herb	Common					*							
<i>Musa x paradisiaca</i>	大蕉	Giant herb	Exotic, Commonly cultivated											*	
<i>Mussaenda erosa</i>	桐藤	Climbing shrub	Common						*						
<i>Neyraudia reynaudiana</i>	筳簕	Herb	Common						*						



Ecological and Conservation Importance of Six Sai Kung Country Park Enclaves

Scientific Name	Chinese Common Name	Growth Form	Status and Distribution in HK ^a	Developed / Village Area	Shrubby Grassland	Seasonally Wet Grassland	Ruderal Area	Pond	Natural Watercourse	Secondary Woodland	Marsh	Mangrove	Ko Tong Ha Yeung Fung Shui Woodland	Ko Tong Fung Shui Woodland	Dry Agricultural Land	Backshore Vegetation
<i>Valis corniculata</i>	酢漿草	Herb	Very common					*								
<i>Althaea cernua</i>	鋪地蜈蚣, 燈籠草	Creeping herb	Very common					*								
<i>Alnus ramosissima</i>	馬甲子	Tree	Common	***							*					
<i>Andropogon austrosinensis</i>	露兜草	Herb	Common						**							
<i>Andropogon tectorius</i>	露兜樹	Small tree	Very common	***							**					
<i>Artemisia dichotomiflorum</i>	水生蕒	Herb	Common							***						
<i>Artemisia maximum</i>	大蕒	Herb	Exotic, Very common		**											
<i>Artemisia repens</i>	鋪地蕒/古骨草	Herb	Very common					*		***						
<i>Asplenium conjugatum</i>	兩耳草	Herb	Exotic, Common				*									
<i>Asplenium scrubiculatum</i> <i>r. orbiculare</i>	圓葉雀巢	Herb	Very common				**									
<i>Begonia hongkongensis</i>	香港大沙蕒	Shrub or small tree	Common, Protected under Cap. 96A			*	***			**						
<i>Blystrum lanuginosum</i>	田恩	Herb	Common					*		**					**	
<i>Breynia laurifolia</i>	刺葵	Shrub or small tree	Common						*							
<i>Cynodon dactylon</i>	絲子, 油甘子	Tree	Very common	*					*						*	
<i>Cynodon pulchellus</i>	排錢草	Shrub	Very common											*		
<i>Clerodendron cathayanum</i>	青葙	Climber	Restricted			*		*								
<i>Clerodendron hancei</i>	山葙	Climber	Very common					*								
<i>Clerodendron rubra</i>	雞歪花	Tree	Exotic, Commonly planted for greening											*		
<i>Cynodon barbatus</i>	毛蕒	Herb	Common			*										
<i>Cynodon chinensis</i>	火炭母	Herb	Very common					*								

Ecological and Conservation Importance of Six Sai Kung Country Park Enclaves

Scientific Name	Chinese Common Name	Growth Form	Status and Distribution in HK ^a	Developed / Village Area	Shrubby Grassland	Seasonally Wet Grassland	Ruderal Area	Pond	Natural Watercourse	Secondary Woodland	Marsh	Mangrove	Ko Tong Ha Yeung Fung Shui Woodland	Ko Tong Fung Shui Woodland	Dry Agricultural Land	Backshore Vegetation
<i>Polygonum glabrum</i>	光蓼	Herb	Restricted							**						
<i>Polygonum pubescens</i>	短毛蓼	Herb	Common							*						
<i>Praxelis clematidea</i>	銀臭草	Herb	Exotic, Very common			*										
<i>Prunus persica</i>	桃	Tree	Exotic, Commonly planted for fruit													
<i>Psychotria asiatica</i>	九節	Shrub	Very common	*		***			***							
<i>Pteris blairiana</i>	狹眼鳳尾蕨	Herb	Common		*											
<i>Pteris semipinnata</i>	半邊旗	Herb	Very common				*			*						
<i>Pueraria lobata</i>	野葛	Climber	Very common			*		*	*							
<i>Rhodomys tomentosa</i>	桃金娘	Shrub	Very common						*							
<i>Rhus hypoleuca</i>	白背鹽樹木	Tree	Common				*		*						**	
<i>Rourea microphylla</i>	小葉紅葉藤, 紅葉藤	Woody climber	Common						*							
<i>Sacciolepis indica</i>	蕨類草	Herb	Very common						*							
<i>Sageretia thea</i>	雀梅藤	Shrub	Common						**		*					
<i>Sapium discolor</i>	山烏柏	Tree	Very common						**							
<i>Sapium sebiferum</i>	烏柏	Tree	Common						*						***	*
<i>Sarcandra glabra</i>	草珊瑚	Subshrub	Common		*				*							
<i>Schefflera heptaphylla</i>	鴨腳木	Tree	Very common			**	*		**						*	
<i>Schinus molle</i>	木荷	Tree	Common						**						*	
<i>Scolopia chinensis</i>	刺楸	Tree	Common	**												
<i>Scolopia saeva</i>	廣東刺楸	Tree	Common						*							

Ecological and Conservation Importance of Six Sai Kung Country Park Enclaves

Scientific Name	Chinese Common Name	Growth Form	Status and Distribution in IHK ^a	Backshore Vegetation	Dry Agricultural Land	Woodland	Ko Tong Fung Shui Woodland	Ko Tong Fung Shui Woodland	Marsh	Secondary Woodland	Natural Watercourse	Pond	Ruderal Area	Seasonally Wet Grassland	Shrubby Grassland	Developed / Village Area
<i>Scoparia dulcis</i>	冰糖草	Herb	Common										*		*	
<i>Senna tora</i>	決明、假綠豆	Shrub	Exotic, Common												***	
<i>Solanum erianthum</i>	假煙葉樹	Shrub	Exotic, Common						*	*						
<i>Solanum torvum</i>	水茄	Shrub	Exotic, Common										*		**	
<i>Spermacoce stricta</i>	蠶花草	Herb	Restricted		*											
<i>Sphaerocaryum malaccense</i>	梓藤	Herb	Common						**			**				
<i>Spilanthes paniculata</i>	金鈕扣	Herb	Common						*				*		**	
<i>Sterculia lanceolata</i>	假楤婆	Tree	Very common		**	*			***						*	
<i>Strophanthus divaricatus</i>	羊角拗	Woody climber	Common						*							
<i>Strychnus angustiflorus</i>	牛眼馬錢	Woody climber	Common	*												
<i>Symplocos cochinchinensis</i> var. <i>laurina</i>	黃牛奶樹	Tree	Common						*							
<i>Syzygium hancei</i>	韓氏蒲桃、紅鱗蒲桃	Tree	Common						*							
<i>Syzygium jambos</i>	蒲桃	Tree	Exotic, Common	*	*				*						*	
<i>Syzygium levinei</i>	山蒲桃	Tree	Common				*		*							
<i>Tadehagi triquetrum</i>	胡蘆茶	Shrub	Very common						*							
<i>Tetracera asiatica</i>	錫葉樹	Woody climber	Very common		*				*							
<i>Tithonia diversifolia</i>	麒麟菊、假向日葵	Herb	Exotic, Common		**											
<i>Taxocarpus wightianus</i>	弓果藤	Slender woody climber	Very common						*							

Ecological and Conservation Importance of Six Sai Kung Country Park Enclaves

Scientific Name	Chinese Common Name	Growth Form	Status and Distribution in IHK ^a	Backshore Vegetation	Dry Agricultural Land	Woodland	Ko Tong Fung Shui Woodland	Ko Tong Fung Shui Woodland	Marsh	Secondary Woodland	Natural Watercourse	Pond	Ruderal Area	Seasonally Wet Grassland	Shrubby Grassland	Developed / Village Area
<i>Tylophora ovata</i>	娃兒藤	Slender woody climber	Common										*		*	
<i>Urena lobata</i>	尚梵天花	Subshrub	Common										***		***	
<i>Urena procumbens</i>	梵天花	Subshrub	Common										*		*	*
<i>Utricularia bifida</i>	挖耳草	Small herb	Common						*			*				
<i>Uvaria macrophylla</i>	紫玉盤	Woody climber	Common		*				**			*				
<i>Vernonia cinerea</i>	復育牛	Herb	Very common									*		*	*	*
<i>Viburnum odoratissimum</i>	珊瑚樹	Tree	Very common	**	**				***	**						
<i>Vitex quinata</i>	山杜柯	Tree	Common						*							
<i>Wedelia biflora</i>	雙頭菊、學花錦雞菊	Herb	Common	*												
<i>Xyris pauciflora</i>	蔥草	Herb	Restricted						*							
<i>Zanthoxylum avicennae</i>	竊櫨花椒	Tree	Common			*			*							
<i>Zanthoxylum nitidum</i>	附面針	Climbing shrub	Very common		*				*				*			
Total			196	23	14	46	18	12	40	86	16	19	34	19	27	34

^a Status follows Xing *et al.* (2000)^b Code for Abundance: ****= Abundant, ***= Frequent, **= Occasional, *= Scarce

Table A1-3. Flora species recorded within Nam Shan Tung enclave

Scientific Name	Chinese Common Name	Growth Form	Status and Distribution in HK ^a	Fung Shui Woodland ^a	Secondary Woodland	Natural Watercourse	Developed / Village Area
<i>Acacia confusa</i>	台灣相思	Tree	Exotic, Common, often planted in plantation	*	*		
<i>Cyperus gramineus</i>	石菖蒲	Herb	Very common			**	
<i>Lilium flabellulatum</i>	扇葉鐵線蕨	Herb	Very common	*	*		
<i>Lilium pilulifera</i>	水團花	Tree	Very common	*	*	**	
<i>Langium chinense</i>	八角楓	Tree	Common	*			*
<i>Locasia macrorrhizos</i>	芥子	Herb	Very common	*	*	*	*
<i>Pinia hainanensis</i>	草豆蔻	Herb	Very common	*		*	
<i>Sisumeles indica</i>	廣防風	Herb	Common				*
<i>Tourusa dioica</i>	銀柴	Tree	Very common	***	***		
<i>Tularia sinensis</i>	土沉香	Tree	Common, Protected under Cap. 586, listed as Near Threatened (NT) in the China Plant Red Data Book and is under State protection (Category II) in China (Hu <i>et al.</i> 2003), classified as Critically Endangered (CR) on the IUCN Red List	*			
<i>Chidendron clypearia</i>	雞耳環	Tree	Common	*			
<i>Adiantum crenata</i>	人龍傘	Shrub	Common		**		
<i>Adiantum lindleyana</i>	山山丹	Shrub	Common		*		
<i>Adiantum quinquegona</i>	羅傘	Small tree	Very common	*	*	**	
<i>Bambusa sp.</i>	竹屬	Bambos	Common	*			
<i>Eleocharis orientalis</i>	烏毛蕨	Herb	Very common	**	**	*	
<i>Eleocharis nivea</i>	學麻	Shrub	Restricted		*		
<i>Engelmannia spectabilis</i>	雞仕蘭	Climbing shrub	Exotic, Common				**
<i>Erythrina fruticosa</i>	黑面神	Shrub	Very common		*		*
<i>Ficus tomentosa</i>	土蜜樹	Tree	Very common	*			
<i>Ficus javanica</i>	鴨腳子	Shrub or tree	Common		*		

Scientific Name	Chinese Common Name	Growth Form	Status and Distribution in HK ^a	Fung Shui Woodland ^a	Secondary Woodland	Natural Watercourse	Developed / Village Area
<i>Rytidaria aspera</i>	刺果藤	Woody climber	Very common	*	**		
<i>Carex chinensis</i>	中華薹草	Herb	Common			*	
<i>Centella asiatica</i>	崩大碗	Herb	Very common	*			
<i>Centothea lappacea</i>	假淡竹葉	Herb	Common		*		
<i>Cibotium barometz</i>	金毛狗	Herb	Very common, Protected under Cap. 586, listed as Vulnerable (VU) in the China Red Data Book and is under State protection (category II) in China (Hu <i>et al.</i> 2003)		*	*	
<i>Cinnamomum parthenoxylon</i>	黃樟	Tree	Common	*	**		
<i>Citrus reticulata</i>	桔	Small tree	Common				*
<i>Clausena lansium</i>	黃皮	Tree	Exotic, Commonly planted for fruit	*			
<i>Cleistocalyx nervosum</i>	水翁	Tree	Common		**	**	
<i>Cratogeomys cochinchinense</i>	黃牛木	Tree	Very common	***	***		
<i>Cuphea platycentra</i>	雪茄花	Herb	Exotic, Commonly planted				*
<i>Cyclosorus parastictus</i>	華南毛蕨	Herb	Very common	*	**	**	*
<i>Dalbergia benthamii</i>	兩廣黃檀	Woody climber	Common	**			
<i>Daphniphyllum calycinum</i>	牛耳楓	Tree	Common	*	**		
<i>Dioscorea chinensis</i>	假鷹爪	Woody climber	Common	*	*		
<i>Dicranopteris pedata</i>	芒萁	Herb	Very common	*	**		
<i>Dimocarpus longan</i>	龍眼、桂圓	Tree	Exotic, Restricted	*	*		*
<i>Elaeagnus laurieri</i>	黃柏紫藤、羅氏胡桐子	Woody climber	Common		*		
<i>Elephantopus scaber</i>	地膽草	Herb	Common	*			
<i>Erythrina variegata</i>	桐桐	Tree	Exotic, Commonly planted				*
<i>Eurya nitida</i>	細齒節竹	Shrub	Very common	*			

Ecological and Conservation Importance of Six Sai Kung Country Park Enclaves

Scientific Name	Chinese Common Name	Growth Form	Status and Distribution in HK ^a	Fung Shui Woodland ^b	Secondary Woodland	Natural Watercourse	Developed / Village Area
<i>Ficus hispida</i>	對葉榕	Tree	Very common				**
<i>Ficus pumila</i>	薛荔	Climber	Very common	*			
<i>Ficus variegata</i> var. <i>chlorocarpa</i>	青果榕	Tree	Common	*			*
<i>Glochidion eriocarpum</i>	毛果算盤子	Tree	Very common	*	**		
<i>Gnetum luofucense</i>	羅浮買麻藤	Climber	Very common, regarded as "Near Threatened" according to IUCN Red List	*	*		
<i>Helicteres angustifolia</i>	山芝麻	Subshrub	Very common		*		
<i>Ilex asprella</i>	梅葉冬青	Shrub	Very common	*	*		
<i>Ilex cinerea</i>	灰冬青	Tree	Common	*			
<i>Kalanchoe pinnata</i>	落地生根	Herb	Exotic, Common				*
<i>Lantana camara</i>	馬纓丹	Shrub	Exotic, Very common				*
<i>Lepidagathis incurva</i>	鱗花草	Herb	Common		*		
<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	斜皮樟	Tree	Very common	*			
<i>Lophatherum gracile</i>	淡竹葉	Herb	Very common		*		
<i>Lygodium japonicum</i>	海金沙	Climber	Very common	*	*		
<i>Machilus chekiangensis</i>	浙江潤楠	Tree	Very common	*	**		
<i>Macra perlarius</i>	鱈魚鱗	Shrub	Common	*			
<i>Mallotus paniculatus</i>	白楸	Tree	Very common	***			**
<i>Mangifera indica</i>	芒果	Tree	Exotic, Commonly planted for fruit	*			
<i>Melastoma malabathricum</i>	野牡丹	Shrub	Common		*		
<i>Melicope pteleifolia</i>	三椏苦	Tree	Common		*		
<i>Millettia dielsiana</i>	山雞血藤	Woody climber	Very common		*		
<i>Parderia scandens</i>	雞矢藤	Climber	Very common				*



Ecological and Conservation Importance of Six Sai Kung Country Park Enclaves

Scientific Name	Chinese Common Name	Growth Form	Status and Distribution in HK ^a	Fung Shui Woodland ^b	Secondary Woodland	Natural Watercourse	Developed / Village Area
<i>Palhinhaea cernua</i>	細地蜈蚣, 燈籠草	Creeping herb	Very common		*		
<i>Pandanus austrosinensis</i>	露兜草	Herb	Common	*		*	
<i>Panicum brevifolium</i>	短葉黍	Herb	Very common			*	
<i>Phoenix loureirai</i>	刺葵	Shrub or small tree	Common		*		
<i>Pronephrium simplex</i>	單葉新月蕨	Herb	Very common	*			
<i>Psidium guajava</i>	番石榴	Tree	Exotic, Common				*
<i>Psychotria asiatica</i>	九節	Shrub	Very common	***	***	**	
<i>Pteris biauaria</i>	狹眼鳳尾蕨	Herb	Common	*			
<i>Pteris semipinnata</i>	半邊旗	Herb	Very common	*	*	*	
<i>Pyrrosia adnascens</i>	貼生石蕨	Herb	Common	*			
<i>Rhodomyrtus tomentosa</i>	桃金娘	Shrub	Very common	*			
<i>Rubus leucanthus</i>	白花懸鈎子	Climbing shrub	Common		*		
<i>Rubus reflexus</i>	蛇泡藤	Climbing shrub	Very common	*	*	*	
<i>Sageretia thea</i>	雀梅藤	Shrub	Common	*	*		
<i>Sapium discolor</i>	山烏柏	Tree	Very common	*	*		
<i>Sapium sebiferum</i>	烏桕	Tree	Common	*	*		
<i>Sarcandra glabra</i>	草珊瑚	Subshrub	Common	*	*		
<i>Saurauia triatyla</i>	水東哥	Tree	Common	*	*	**	
<i>Schefflera heptaphylla</i>	鴨腳木	Tree	Very common	***	***		
<i>Scutopia saeva</i>	廣東刺楸	Tree	Common		*		
<i>Selaginella doederleinii</i>	深綠卷柏	Herb	Common		*		
<i>Smilax china</i>	金剛藤	Climbing shrub	Very common	*			



Scientific Name	Chinese Common Name	Growth Form	Status and Distribution in HK [^]	Developed / Village Area	Natural Watercourse	Secondary Woodland	Fung Shui Woodland [#]
<i>milax glabra</i>	土茯苓, 光倍菝葜	Climbing shrub	Very common			*	*
<i>phenomeris chinensis</i>	烏韭	Herb	Common			*	
<i>Cercaria lanceolata</i>	雞筋菜	Tree	Very common		*	**	*
<i>zygium hancei</i>	神氏蒲桃, 紅鱗蒲桃	Tree	Common			*	*
<i>zygium levinet</i>	山蒲桃	Tree	Common			*	*
<i>tetracera asiatica</i>	錫鐵藤	Woody climber	Very common			*	*
<i>Irena lobata</i>	尚梵天花	Subshrub	Common			*	
<i>varia macrophylla</i>	紫玉盤	Woody climber	Common			*	
<i>thurnum odoratissimum</i>	珊瑚樹	Tree	Very common			*	**
<i>ikstroemia nutans</i>	細輪密花	Shrub	Common			*	
<i>anthoxylum avicennae</i>	藨草花柳	Tree	Common			*	
Total			97			58	60

[^] Status follows Xing et al. (2000).

[#] Code for Abundance: *** = Abundant, ** = Frequent, * = Occasional, = = Scarce

Table A1-4. Flora species recorded within Pak Tam Au enclave

Scientific Name	Chinese Common Name	Growth Form	Status and Distribution in HK [^]	Developed / Village Area	Natural Watercourse	Secondary Woodland	Marsh	Grassland	Plantation	Pond	Seasonally Wet Grassland	Shrubby Grassland	Waste Ground
<i>Abrus mollis</i>	毛相思子	Woody climber	Restricted			*							
<i>Acacia confusa</i>	台灣相思	Tree	Exotic, Common, often planted in plantation	**		*			***			*	
<i>Acorus gramineus</i>	石菖蒲	Herb	Very common	**					*				
<i>Adiantum flabellulatum</i>	扇葉鐵線蕨	Herb	Very common	*									
<i>Adina pilulifera</i>	水團花	Tree, 5m	Very common	**									*
<i>Adinandra millettii</i>	黃瑞木	Tree	Common			*							
<i>Agave americana</i>	龍舌蘭	Perennial Herb	Exotic, Cultivated in HK (AFCD 2011)			*							
<i>Ageratum conyzoides</i>	假香薷, 勝紅菊	Herb	Exotic, Exotic (pantropical herb of American origin), very common	*	**	*			*				**
<i>Alangium chinense</i>	八角楓	Tree	Common	***		*	***		**				
<i>Alocasia macrorrhizos</i>	海芋	Herb	Very common	*		*	*						
<i>Alternanthera sessilis</i>	蓮子草	Herb	Common			*							
<i>Ampelopsis cantoniensis</i>	廣東蛇葡萄	Climber	Very common	**		*							
<i>Aporosa dinica</i>	銀紫	Tree	Very common	***		***							
<i>Aquilaria sinensis</i>	土沉香	Tree	Common, Protected under Cap. 586, listed as Near Threatened (NT) in the China Plant Red Data Book and is under State protection (Category II) in China (Hu <i>et al.</i> 2003), classified as Critically Endangered (CR) on the IUCN Red List	*		*			*				
<i>Archidendron clypearia</i>	猴耳環	Tree	Common			*							
<i>Archidendron lucidum</i>	亮葉猴耳環	Tree	Common			*							

Ecological and Conservation Importance of Six Sai Kung Country Park Enclaves

Scientific Name	Chinese Common Name	Growth Form	Status and Distribution in HK ^a	Waste Ground	Shrubby Grassland	Seasonally Wet Grassland	Pond	Plantation	Natural Watercourse	Secondary Woodland	Marsh	Grassland	Developed / Village Area	Channelized Watercourse	Fung Shui Woodland ^b
<i>Ardisia crenata</i>	大羅傘	Shrub	Common	**					*						
<i>Ardisia quinquegona</i>	羅傘	Small tree	Very common	*						**					
<i>Arundinella setosa</i>	刺芒野古草	Herb	Very common									*			
<i>Axonopus compressus</i>	地毡草	Herb	Exotic, Common								***				
<i>Baeckea frutescens</i>	崗松	Shrub	Very common								*				* **
<i>Bambusa</i> sp.	竹屬	Bambos	Common							*					
<i>Basella alba</i>	落葵, 海菜	Herbaceous climber	Exotic, Restricted							*					
<i>Bauhinia variegata</i>	宮粉羊蹄甲	Tree	Exotic, Common							*					
<i>Bischofia javanica</i>	秋楓	Tree	Common							***					*
<i>Blechnum orientale</i>	烏毛蕨	Herb	Very common		*		*	**	**	*					
<i>Bougainvillea spectabilis</i>	霸杜鵑	Climbing shrub	Exotic, Common	**											
<i>Breynia fruticosa</i>	黑面神	Shrub	Very common				*	*		*					*
<i>Bridelia tomentosa</i>	土蜜樹	Tree	Very common	*		*	**	*	*						
<i>Cajanus scarabacoides</i>	蔓草蠶豆	Climber	Common				*								
<i>Callicarpa formosana</i>	杜虹花	Shrub	Common					*		*					
<i>Callicarpa kochiana</i>	枇杷紫紫珠	Shrub	Common					*		*					
<i>Casuarina equisetifolia</i>	木麻黃, 牛尾松	Tree	Exotic, often planted in plantation and along roadside, apparently semi-naturalized in the nature												
<i>Cayratia corniculata</i>	角花烏蘞莓	Climber	Very common					*		*					
<i>Centella asiatica</i>	崩大碗	Herb	Very common					*	*	*					*
<i>Centothea lappacea</i>	假淡竹葉	Herb	Common					*	*	*					

Ecological and Conservation Importance of Six Sai Kung Country Park Enclaves

Scientific Name	Chinese Common Name	Growth Form	Status and Distribution in HK ^a	Waste Ground	Shrubby Grassland	Seasonally Wet Grassland	Pond	Plantation	Natural Watercourse	Secondary Woodland	Marsh	Grassland	Developed / Village Area	Channelized Watercourse	Fung Shui Woodland ^b
<i>Chrysopogon aciculatus</i>	竹節草, 假雀稗	Herb	Very common			***						*** **			
<i>Cinnamomum camphora</i>	樟	Tree	Common							**		*	*		
<i>Cinnamomum parthenoxylon</i>	黃樟	Tree	Common	***						*					
<i>Cleistanthus nervosum</i>	水翁	Tree	Common	**	**					***					
<i>Colocasia esculenta</i>	芋	Herb	Cultivated						*						*
<i>Commelina diffusa</i>	節節草	Herb	Common		**				*	**				***	
<i>Cratoxylum cochinchinense</i>	黃牛木	Tree	Very common						*						*
<i>Cyclobalanopsis myrsinifolia</i>	小葉青岡	Tree	Common							*					
<i>Cyclosorus interruptus</i>	闊葉毛蕨	Herb	Common											***	
<i>Cyclosorus parasiticus</i>	華南毛蕨	Herb	Very common	*	**		*	*	**	*	**	*			*
<i>Cynodon dactylon</i>	狗牙根	Herb	Very common						*						
<i>Cyperus difformis</i>	異型莎草	Herb	Very common												*
<i>Cyperus iria</i>	碎米莎草	Herb	Common						*	*					
<i>Cyperus</i> sp.	莎草屬	Herb	Common						*						
<i>Cyrtococcum patens</i>	弓果黍	Herb	Very common	**											
<i>Daphniphyllum calycinum</i>	牛耳楓	Tree	Common	*			*	***	*	*					*
<i>Desmodium gangeticum</i>	大葉山黧麻	Subshrub	Common				*	*							
<i>Desmodium triflorum</i>	三點金	Herb	Very common				**	*						***	*
<i>Desmox chinensis</i>	假藤爪	Woody climber	Common				*		**						

Scientific Name	Chinese Common Name	Growth Form	Status and Distribution in HK ^a	Waste Ground	Shrubby	Grassland	Seasonally Wet	Pond	Plantation	Natural	Watercourse	Secondary Woodland	Marsh	Grassland	Developed / Village Area	Channelized Watercourse	Pang Shui Woodland
<i>Smilax chinensis</i>	假藤瓜	Woody climber	Common	**													
<i>Micropteryx pedata</i>	芭蕉	Herb	Very common	*	*	**			**								****
<i>Uncaria longan</i>	龍眼, 性樹	Tree	Exotic, Restricted	*								*					
<i>Isocorea bulbifera</i>	黃獨	Climber	Common								*						
<i>Isocorea cirrhosa</i>	薯蕷	Climber	Common			*											
<i>Tospireus morrisiana</i>	羅浮柿	Tree	Very common	*													
<i>Lipia prostrata</i>	鵝腸	Herb	Common			*	**										
<i>Elchornia crassipes</i>	咸果樹, 大水萍	Floating herb	Exotic, Common														***
<i>Laegus loureirii</i>	雞柏紫藤, 羅氏胡桐子	Woody climber	Common	*							*						
<i>Laegus decipiens</i>	杜英	Tree	Common	*													
<i>Lecharis spiralis</i>	螺旋鱗莖	Herb	Regarded as Rare in Xing <i>et al.</i> (2000), common in several districts in HK including Yuen Long, Mai Po and Tai Ho (AFCD 2012)									**					**
<i>Ubelia laeta</i>	龍藤子	Woody climber	Very common	*		**											
<i>Ubelia ribes</i>	白花龍藤子	Woody climber	Common								*						
<i>Milia sonchifolia</i>	一點紅	Herb	Very common								*						
<i>Agrostis atrovirens</i>	鼠婦草	Herb	Common			*											
<i>Agrostis tenella</i>	鵝魚草, 南方知風草	Herb	Very common						**								
<i>Stocaulon xangulare</i>	華南蛇精草	Herb	Very common		*						***						
<i>Aptatorium chinense</i>	華澤蘭, 蘭草	Herb	Restricted			*											

Scientific Name	Chinese Common Name	Growth Form	Status and Distribution in HK ^a	Waste Ground	Shrubby	Grassland	Seasonally Wet	Pond	Plantation	Natural	Watercourse	Secondary Woodland	Marsh	Grassland	Developed / Village Area	Channelized Watercourse	Pang Shui Woodland
<i>Eurya nitida</i>	細齒草仔	Shrub	Very common		*											*	
<i>Ficus hirta</i>	粗葉榕	Shrub	Common			*				*							
<i>Ficus hispida</i>	對葉榕	Tree	Very common	*		*	*	*	*	*							
<i>Ficus microcarpa</i>	細葉榕	Tree	Common			**	*	*	*	*							*
<i>Ficus pumila</i>	碎蕊	Climber	Very common							**							
<i>Ficus subspicarpa</i>	筆管榕	Tree	Common					*									
<i>Ficus variegata var. chlorocarpa</i>	青果榕	Tree	Common	*				*									*
<i>Ficus variolosa</i>	雙葉榕	Shrub or tree, 5m (10m)	Very common		*												
<i>Fimbristylis aestivalis</i>	夏蠟拂草	Herb	Restricted	*													
<i>Fimbristylis sieboldii</i>	錫鬚拂草	Herb	Common			*		*									
<i>Grassia cristata</i>	雞苞豆	Herb	Regarded as Rare in Xing <i>et al.</i> (2000), restricted to several locations including Deep Water Bay, Tai Mong Tsai, Sai Keng and Lantau Island according to AFCD 2008			**	**										**
<i>Glochidion eriocarpum</i>	毛果算盤子	Tree	Very common														*
<i>Glochidion hirsutum</i>	厚葉算盤子	Tree	Common														***
<i>Glochidion lanceolatum</i>	艾羅算盤子, 大葉算盤子	Shrub	Common			*	****	*	**								***
<i>Glochidion zeylanicum</i>	香港算盤子	Shrub	Common	**													
<i>Hedyotis auricularia</i>	耳草	Herb	Common			**											*
<i>Hedyotis diffusa</i>	白花蛇舌草	Herb	Very common		*	*		*									
<i>Ilex pubescens</i>	毛冬青	Shrub	Very common			*											

Ecological and Conservation Importance of Six Sai Kung Country Park Enclaves

Scientific Name	Chinese Common Name	Growth Form	Status and Distribution in HK ^a	Waste Ground	Shrubby Grassland	Seasonally Wet Grassland	Pond	Plantation	Natural Watercourse	Secondary Woodland	Marsh	Grassland	Developed / Village Area	Channelized Watercourse	Fung Shui Woodland ^b
<i>Imperata cylindrica</i> var. <i>majus</i>	絲茅	Herb	Very common									**			
<i>Ipomoea cairica</i>	五爪金龍	Herbaceous climber	Exotic, Very common	*	**	**				*					
<i>Ischaemum barbatum</i>	粗毛鴨嘴草	Herb	Very common									***			
<i>Jatropha integririma</i>	全緣葉麻瘋	Shrub	Exotic, Cultivated									*			
<i>Kyllinga brevifolia</i>	短莖水蜈蚣	Herb	Common									*	*		
<i>Kyllinga nemoralis</i>	單穗水蜈蚣	Herb	Very common	*		*			*						
<i>Lantana camara</i>	馬纓丹	Shrub	Exotic, Very common	*		**	*	*							**
<i>Leersia hexandra</i>	李氏禾	Herb	Common		*										***
<i>Leucaena leucocephala</i>	銀合歡	Tree	Exotic, Common		*									*	
<i>Lindernia antipoda</i>	泥花草	Herb	Common					*				*			
<i>Lindernia crustacea</i>	母草	Herb	Restricted									*			*
<i>Liparis ferruginea</i>	銹色羊耳蒜	Herb	Regarded as Scarce and Restricted, and is a locally endangered species(EN) in HK (Barretto <i>et al.</i> 2011)									*			
<i>Litchi chinensis</i>	荔枝	Tree	Exotic, Restricted	*											
<i>Litsea cubeba</i>	木薑子	Tree	Common	*											
<i>Litsea glutinosa</i>	蒜榔樹	Tree	Very common	*											*
<i>Litsea monopetala</i>	假柿木薑子	Tree	Restricted							*					
<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	針皮樟	Tree	Very common	*											**
<i>Lophatherum gracile</i>	淡竹葉	Herb	Very common					*	*						
<i>Ludwigia adscendens</i>	水龍	Herb	Common												**
<i>Ludwigia perennis</i>	細花丁香蓼	Herb	Restricted					*							

Ecological and Conservation Importance of Six Sai Kung Country Park Enclaves

Scientific Name	Chinese Common Name	Growth Form	Status and Distribution in HK ^a	Waste Ground	Shrubby Grassland	Seasonally Wet Grassland	Pond	Plantation	Natural Watercourse	Secondary Woodland	Marsh	Grassland	Developed / Village Area	Channelized Watercourse	Fung Shui Woodland ^b
<i>Lygodium flexuosum</i>	曲軸海金沙	Climber	Very common		*				*	*					
<i>Lygodium japonicum</i>	海金沙	Climber	Very common						*			**			
<i>Lygodium scandens</i>	小葉海金沙	Climber	Common						*						
<i>Machilus breviflora</i>	短序潤楠	Tree	Very common	*											
<i>Machilus chekiangensis</i>	浙江潤楠	Tree	Very common	**	*				****	**	*				*
<i>Machilus pauhoi</i>	刨花潤楠	Tree	Regarded as Very Rare in Xing <i>et al.</i> (2000), common in several districts in HK including Tai Mo Shan, Shing Mun and Tai Po Kau (Personal observation)						*						
<i>Macropitium lathyroides</i>	大翼豆	Creeper herb	Exotic, Common						*						
<i>Macrothelypteris torresiana</i>	普通針毛蕨	Herb	Very common												*
<i>Maesa perlaris</i>	鯉魚藤	Shrub	Common	**		*		***	**						**
<i>Malolus paniculatus</i>	白楸	Tree	Very common	**				***	*						*
<i>Melastoma malabathricum</i>	野牡丹	Shrub	Common		*	***	*	*	**	*				***	**
<i>Melastoma sanguineum</i>	毛茛	Shrub	Common			**	**								**
<i>Microstegium ciliatum</i>	潤茅竹	Herb	Very common		*										
<i>Mikania micrantha</i>	微甘菊	Herbaceous climber	Exotic, Very common	*				*							
<i>Mimosa pudica</i>	含羞草	Herb	Exotic, Very common				**								
<i>Miscanthus sinensis</i>	芒	Herb	Very common				*								
<i>Mucuna birdwoodiana</i>	白花油桐藤、勃氏蠶豆	Woody climber	Common	**											

Ecological and Conservation Importance of Six Sai Kung Country Park Enclaves

Scientific Name	Chinese Common Name	Growth Form	Status and Distribution in HK ^a	Waste Ground	Shrubby	Grassland	Seasonally Wet	Pond	Plantation	Natural	Watercourse	Secondary Woodland	Marsh	Grassland	Developed / Village Area	Channelized Watercourse	Fung Shui Woodland ^b
<i>Aussaenda pubescens</i>	玉帶金花	Climbing shrub	Very common										*				
<i>Belunho nucifera</i>	荷花	Aquatic herb	Exotic. Commonly planted				**										
<i>Oxbeckia chinensis</i>	金錦香, 天香爐	Herb	Very common														*
<i>Oxalis corniculata</i>	酢漿草	Herb	Very common			*	*	*		*							
<i>Paederia scandens</i>	羅漢藤	Climber	Very common						*			*					*
<i>Paliuhaua cernua</i>	鋪地蜈蚣, 燈籠草	Creeping herb	Very common						*			*		**			*
<i>Pandanus toctorius</i>	露兜樹	Small tree	Very common			*											
<i>Panicum brevifolium</i>	短葉草	Herb	Very common						*					*			
<i>Panicum dichotomiflorum</i>	水生草	Herb	Common							*	*						
<i>Panicum repens</i>	鋪地草, 枯骨草	Herb	Very common									**				**	
<i>Paspalum conjugatum</i>	兩耳草	Herb	Exotic. Common									*		***		***	
<i>Paspalum distichum</i>	雙穗雀稗	Herb	Common									*					
<i>Paspalum scrobiculatum</i> var. <i>orbiculare</i>	圓果雀稗	Herb	Very common			*						**				*	
<i>Pavetta hongkongensis</i>	香港大沙菜	Shrub or small tree	Common. Protected under Cap. 96A									*					
<i>Philydrium lanuginosum</i>	田蔥	Herb	Common									***				**	**
<i>Phyllanthus emblica</i>	餘日子, 油甘子	Tree	Very common						*			*				*	
<i>Plantago major</i>	車前草	Herb	Very common			*								*			

Ecological and Conservation Importance of Six Sai Kung Country Park Enclaves

Scientific Name	Chinese Common Name	Growth Form	Status and Distribution in HK ^a	Waste Ground	Shrubby	Grassland	Seasonally Wet	Pond	Plantation	Natural	Watercourse	Secondary Woodland	Marsh	Grassland	Developed / Village Area	Channelized Watercourse	Fung Shui Woodland ^b
<i>Polyspora axillaris</i>	大羽茶	Tree	Very common							*			**	*			
<i>Pronephrium simplex</i>	單葉折月蕨	Herb	Very common		*					*						*	
<i>Psidium guajava</i>	番石榴	Tree	Exotic. Common			*			*	*			*	*	**	*	
<i>Psychotria asiatica</i>	九節	Shrub	Very common							**	**	***	*	*	**		
<i>Pteris ensiformis</i>	劍葉鳳尾蕨, 井邊荷	Herb	Common										*				
<i>Pteris multifida</i>	井邊蓮草	Herb	Very common						*	*							
<i>Pteris scimpinaria</i>	半邊旗	Herb	Very common			*				*			*				
<i>Pterocarpus indicus</i>	紫檀, 牛血樹	Tree	Exotic. Common						*								
<i>Pueraria lobata</i>	野葛	Climber	Very common						*						**		
<i>Pycnus polystachyus</i>	多穗扁莎	Herb	Very common										*	*		*	**
<i>Rhaphiolepis indica</i>	車輪梅	Shrub or small tree	Very common							*	*			*			
<i>Rhodomyrtus tomentosa</i>	桃金娘	Shrub	Very common	*					*	*			*	**		*	***
<i>Rhus chinensis</i>	鹽膚木	Tree	Common						*	*		*		*		*	*
<i>Rhus succedanea</i>	野漆樹	Tree	Common	*					*	**				*		*	
<i>Rosa laevigata</i>	金櫻子	Climbing shrub	Common														*
<i>Rourea microphylla</i>	小葉紅銀藤, 紅銀藤	Woody climber	Common			*				*			*				
<i>Rubus leucanthus</i>	白花懸鈎子	Climbing shrub	Common							*							
<i>Rubus reflexus</i>	蛇泡葛	Climbing shrub	Very common	*					*	*			*				
<i>Sacciolepis indica</i>	囊穎草	Herb	Very common							*	*		*	*		*	

Ecological and Conservation Importance of Six Sai Kung Country Park Enclaves

Scientific Name	Chinese Common Name	Growth Form	Status and Distribution in HK ^a	Fung Shui Woodland ^d	Developed / Village Area	Channelized Watercourse	Marsh	Secondary Woodland	Natural Watercourse	Plantation	Pond	Seasonally Wet Grassland	Shrubby Grassland	Waste Ground
<i>Sageretia thea</i>	雀梅樹	Shrub	Common	**				*						
<i>Sagittaria sagittifolia</i>	慈菇	Aquatic herb	Restricted					*						
<i>Sapium discolor</i>	山烏柏	Tree	Very common	*				**						*
<i>Sapium sebiferum</i>	烏柏	Tree	Common	*			*	***		*				*
<i>Sarcandra glabra</i>	草珊瑚	Subshrub	Common					**						
<i>Saurauia tristyla</i>	水東哥	Tree	Common	*					**					
<i>Schefflera arboricola</i>	蘭掌藤	Shrub	Exotic, Common		*			*	*	*				
<i>Schefflera heptaphylla</i>	鶴腳木	Tree	Very common	***	**			**						
<i>Selaginella uncinata</i>	裂葉草	Herb	Common		*									
<i>Senna bicapsularis</i>	雙英決明, 雙英槐	Shrub	Exotic, Occasionally cultivated in HK (AFCD 2008)		*			*						
<i>Smilax china</i>	金剛藤	Climbing shrub	Very common				*							
<i>Solanum torvum</i>	水茄	Shrub	Exotic, Common				*							
<i>Spermacoce latifolia</i>	闊葉蓋花草	Herb	Exotic, Restricted					*						
<i>Spermacoce stricta</i>	蓋花草	Herb	Restricted					*						
<i>Spilanthes paniculata</i>	金鈕扣	Herb	Common			*								
<i>Stachytarpheta jamaicensis</i>	假馬鞭	Herb	Exotic, Common		*	*	*	*						
<i>Sterculia lanceolata</i>	假烏欖	Tree	Very common	*				*						
<i>Symplocos cochinchinensis</i> var. <i>laurina</i>	黃牛奶樹	Tree	Common	**										
<i>Symplocos crassifolia</i>	厚葉山欖, 厚葉灰木	Tree	Common					*						

Ecological and Conservation Importance of Six Sai Kung Country Park Enclaves

Scientific Name	Chinese Common Name	Growth Form	Status and Distribution in HK ^a	Fung Shui Woodland ^d	Developed / Village Area	Channelized Watercourse	Marsh	Secondary Woodland	Natural Watercourse	Plantation	Pond	Seasonally Wet Grassland	Shrubby Grassland	Waste Ground
<i>Scygium hancei</i>	韓氏蒲桃, 紅鱗蒲桃	Tree	Common	**				*	*	*				
<i>Scygium jambos</i>	蒲桃	Tree	Exotic, Common	*			*							
<i>Scygium levinetii</i>	山蒲桃	Tree	Common	*										
<i>Tadehagi triquetrum</i>	葫蘆茶	Shrub	Very common				*	*						
<i>Tetracera asiatica</i>	錫葉藤	Woody climber	Very common	**	*			**						
<i>Tetradium glabrifolium</i>	極葉吳茱萸	Tree	Common	*										
<i>Tinospora sagittata</i>	青牛膽	Climber	Common						*					
<i>Toddalia asiatica</i>	飛廉掌血	Climbing shrub	Restricted					*						
<i>Turpinia montana</i>	山青圓	Tree	Common					*						
<i>Tylophora ovata</i>	娃兒藤	Slender woody climber	Common	*	*			*						
<i>Urena lobata</i>	苘梵天花	Subshrub	Common		**	**	*	*		*			**	
<i>Urena procumbens</i>	梵天花	Subshrub	Common			*	*	*						
<i>Utricularia bifida</i>	挖耳草	Small herb	Common		*									
<i>Uvaria macrophylla</i>	紫玉盤	Woody climber	Common	**										
<i>Viburnum odoratissimum</i>	珊瑚樹	Tree	Very common	***		*	*	***		**				
<i>Vitex negundo</i>	黃荊	Shrub	Common			*								
<i>Vitex quinata</i>	山牡荊	Tree	Common					*						
<i>Wedelia chinensis</i>	錦雞菊	Perennial herb	Common							*				
<i>Wedelia trilobata</i>	三裂錦雞菊	Herb	Exotic, Common				*				*			

Scientific Name	Chinese Common Name	Growth Form	Status and Distribution in HK ^a	Developed / Village Area	Channelized Watercourse	Grassland	Marsh	Secondary Woodland	Natural Watercourse	Plantation	Pond	Seasonally Wet Grassland	Shrubby Grassland	Waste Ground
<i>Albizia japonica</i>	黃鶴筆	Herb	Very common			*								
<i>Anthoxylum nitidum</i>	蘆花	Tree	Common	*	*		**		*					
<i>Anthoxylum nitidum</i>	Climbing shrub	Very common					*		*		**			
Total			205	60	31	17	80	21	103	20	44	20	11	36

^a Status follows Xing et al. (2000)

^b Code for Abundance: *** = Abundant, ** = Frequent, * = Occasional, = Scarce

Table A1-5. Flora species recorded within To Kwo Peng enclave

Scientific Name	Chinese Common Name	Growth Form	Status and Distribution in HK ^a	Developed / Village Area	Backshore Vegetation	Waste Ground	Shrubby Grassland	Ruderal Area	Natural Watercourse	Secondary Woodland	Marsh	Developed / Village Area
<i>Acanthus ilicifolius</i>	老鼠竊	Herb	Common									
<i>Adiantum flabellulatum</i>	扇葉鐵線蕨	Herb	Very common	*								
<i>Adina pilulifera</i>	水欄花	Tree	Very common					*				
<i>Aegiceras corniculatum</i>	桐花樹	Shrub	Common	*								*
<i>Alangium chinense</i>	八角楓	Tree	Common	**		**	*					
<i>Alocasia macrorrhizos</i>	海芋	Herb	Very common	*			*				*	*
<i>Anisomeles indica</i>	廣防風	Herb	Common				*					
<i>Anilidesma buniis</i>	五月茶, 五味子	Tree	Common	**	*							
<i>Aporosa dioica</i>	銀藥	Tree	Very common	***	***							
<i>Aquilaria sinensis</i>	土沉香	Tree	Common, Protected under Cap. 586, listed as Near Threatened (NT) in the China Plant Red Data Book and is under State protection (Category II) in China (Hui et al. 2003), classified as Critically Endangered (CR) on the IUCN Red List	*								
<i>Archidendron clypearia</i>	猴耳環	Tree	Common	*	*							
<i>Ardisia crenata</i>	大羅傘	Shrub	Common	*								
<i>Ardisia lindleyana</i>	山血丹	Shrub	Common			*						
<i>Ardisia quinquegona</i>	羅傘	Small tree	Very common	*	**							
<i>Aster baccharoides</i>	白舌紫菀	Herb	Very common	*								
<i>Avicennia marina</i>	白骨壤	Tree	Common		**							
<i>Axonopus compressus</i>	地松草	Herb	Exotic, Common				*	**				
<i>Bauhinia championii</i>	缺葉藤	Woody climber	Common				**					

Ecological and Conservation Importance of Six Sai Kung Country Park Enclaves

Scientific Name	Chinese Common Name	Growth Form	Status and Distribution in HK^	Fung Shui Woodland	Mangrove	Secondary Woodland	Ruderal Area	Natural Watercourse	Shrubby grassland	Waste Ground	Vegetation	Developed / Village Area
<i>Blechnum orientale</i>	烏毛蕨	Herb	Very common	*	**							
<i>Breynia fruticosa</i>	黑面神	Shrub	Very common		*		*	*				*
<i>Bridelia tomentosa</i>	土蜜樹	Tree	Very common		*							
<i>Brucea javanica</i>	狗綠子·苦參子	Shrub or tree	Common		*				*			
<i>Bruguiera gymnorhiza</i>	木糠	Tree	Restricted		*							
<i>Byttneria aspera</i>	刺葉藤	Woody climber	Very common	*	*							
<i>Callicarpa kochiana</i>	批把葉紫珠	Shrub	Common	*								
<i>Carallia brachiata</i>	竹節樹	Tree	Common		*							
<i>Cerbera manghas</i>	海芒果	Tree	Common	**	*	*					*	
<i>Cibotium barometz</i>	金毛狗	Herb	Very common. Protected under Cap. 586, listed as Vulnerable (VU) in the China Red Data Book and is under State protection (category II) in China (Hu <i>et al.</i> 2003)		*							
<i>Cinnamomum parthenoxylon</i>	黃樟	Tree	Common	***	*							
<i>Clematis crassifolia</i>	厚葉鐵線蓮	Climber	Restricted			*						
<i>Conyza bonariensis</i>	香絲草	Herb	Exotic, Very common							*		
<i>Conyza canadensis</i>	小蓬草	Herb	Exotic, Very common							*		
<i>Cratoxylum cochinchinense</i>	黃牛木	Tree	Very common	**						*		*
<i>Crinum asiaticum</i> var. <i>sinicum</i>	文殊蘭	Herb	Restricted						*		*	
<i>Cyclosorus interruptus</i>	間斷毛蕨	Herb	Common							*		
<i>Cyclosorus parasiticus</i>	攀南毛蕨	Herb	Very common	*	***							**
<i>Dalbergia benthamii</i>	兩廣黃檀	Woody climber	Common	*						**		

Ecological and Conservation Importance of Six Sai Kung Country Park Enclaves

Scientific Name	Chinese Common Name	Growth Form	Status and Distribution in HK^	Fung Shui Woodland	Mangrove	Secondary Woodland	Natural Watercourse	Ruderal Area	Shrubby grassland	Waste Ground	Vegetation	Developed / Village Area
<i>Daphniphyllum calycinum</i>	牛耳楓	Tree	Common			**						
<i>Desmodium heterocarpon</i>	靛地豆	Subshrub	Very common						*			
<i>Desmos chinensis</i>	假鷹爪	Woody climber	Common	*	*				*			
<i>Dicranopteris pedata</i>	芒萁	Herb	Very common	**	*		**	*				
<i>Dinacarpus longan</i>	龍眼·桂圓	Tree	Exotic, Restricted	**	*							
<i>Dioscorea bulbifera</i>	黃獨	Climber	Common	*								
<i>Elaeocarpus decipiens</i>	杜英	Tree	Common		*							
<i>Elephantopus scaber</i>	地膽草	Herb	Common							*		
<i>Emilia sonchifolia</i>	一點紅	Herb	Very common							*		
<i>Excoecaria agallocha</i>	海漆	Tree	Common	**							*	
<i>Ficus hirta</i>	粗葉榕	Shrub	Common	*								
<i>Ficus hispida</i>	對葉榕	Tree	Very common	*	*							
<i>Ficus pumila</i>	薛荔	Climber	Very common									*
<i>Ficus subpisocarpa</i>	雀舌榕	Tree	Common		*							
<i>Ficus variegata</i> var. <i>chlorocarpa</i>	青果榕	Tree	Common	*								
<i>Ficus variolosa</i>	變葉榕	Shrub or tree	Very common	*								
<i>Glochidion eriocarpum</i>	毛果算盤子	Tree	Very common	*	*			*				
<i>Glochidion zeylanicum</i>	香港算盤子	Shrub	Common		*			**	*		*	
<i>Gnettum luofuense</i>	羅浮寶珠藤	Climber	Very common, regarded as "Near Threatened" according to IUCN Red List	*								
<i>Gymnanthera oblonga</i>	海島藤	Slender woody climber	Regarded as Very Rare in Xing <i>et al.</i> (2000), common in several districts in HK including Sai Kung, Tsing Yi, Yeun Long and Lantau Island (AFCD 2009)		*							

Scientific Name	Chinese Common Name	Growth Form	Status and Distribution in HK ^a	Developed / Village Area	Backshore Vegetation	Waste Ground	Shrubby grassland	Ruderal Area	Natural Watercourse	Secondary Woodland	Mangrove	Fringing Shrub Woodland ^b
<i>Leptocarpus littoralis</i>	銀葉樹	Tree	Restricted		**						*	
<i>Libocedrus thibetensis</i>	黃櫨	Tree	Common		***					*	***	
<i>Leptocarpus asprella</i>	梅葉冬青	Shrub	Very common							*		
<i>Homocidus cairica</i>	五爪金龍	Herbaceous climber	Exotic, Very common									**
<i>Chaenium barbatum</i>	粗毛鴨嘴草	Herb	Very common						**			
<i>Alanchoe pinnata</i>	落地生根	Herb	Exotic, Common									*
<i>Andelia obovata</i>	水筆仔	Tree	Very common							***		
<i>Gyneria nemoralis</i>	單穗水蜈蚣	Herb	Very common									*
<i>Antennaria camara</i>	馬鞭丹	Shrub	Exotic, Very common				**	*				*
<i>Asianthus attenuatus</i>	斜齒粗葉木, 小葉雞屎樹	Shrub	Restricted								**	
<i>Andertia cristata</i>	母草	Herb	Restricted				*					
<i>Andersia orbiculata</i>	圓葉豬籠草	Herb	Very common			*						
<i>Andersia chinensis</i>	荔枝	Tree	Exotic, Restricted		*							
<i>Andersia gracile</i>	淡竹葉	Herb	Very common			*						
<i>Andersia japonicum</i>	海金沙	Climber	Very common		*		*	*	*	*	**	
<i>Andersia scandens</i>	小葉海金沙	Climber	Common		*		*				**	
<i>Andersia tanarius</i> var. <i>mentosa</i>	血桐	Tree	Common						*			
<i>Andersia chekiangensis</i>	浙江潤楠	Tree	Very common			**	***					
<i>Andersia perlarius</i>	鯉魚鱗	Shrub	Common		*		**			*		*
<i>Andersia paniculatus</i>	白楸	Tree	Very common			***	**			*		

Scientific Name	Chinese Common Name	Growth Form	Status and Distribution in HK ^a	Developed / Village Area	Backshore Vegetation	Waste Ground	Shrubby grassland	Ruderal Area	Natural Watercourse	Secondary Woodland	Mangrove	Fringing Shrub Woodland ^b
<i>Melastoma malabathricum</i>	野牡丹	Shrub	Common			*	**	***	*			
<i>Melastoma sanguineum</i>	毛蕊	Shrub	Common			*		*				
<i>Melicope ptelefolia</i>	三椏苦	Tree	Common			*						
<i>Microcos nervosa</i>	坡布藤, 布滾藤	Tree	Common		*							
<i>Microstegium ciliatum</i>	剛莠竹	Herb	Very common			**						
<i>Mikania micrantha</i>	蘇甘菊	Herbaceous climber	Exotic, Very common		*		**	**	**	*	**	
<i>Mimosa pudica</i>	含羞草	Herb	Exotic, Very common			**	**					
<i>Neyraudia reynaudiana</i>	類蘆	Herb	Common				*					
<i>Paederia scandens</i>	雞矢藤	Climber	Very common				*					*
<i>Paspalum cernuum</i>	鋪地蜈蚣, 蜈蚣草	Creeping herb	Very common				*					
<i>Paspalum ramosissimum</i>	馬甲子	Tree	Common		*						**	
<i>Pandanus austrosinensis</i>	露兜草	Herb	Common		*							
<i>Pandanus tectorius</i>	露兜樹	Small tree	Very common		*	*	**	*	*	***		
<i>Paspalum conjugatum</i>	兩耳草	Herb	Exotic, Common				*	**				
<i>Paspalum scrobiculatum</i> var. <i>orbiculare</i>	圓果雀稗	Herb	Very common				*					
<i>Pavetta hongkongensis</i>	香港大沙撈	Shrub or small tree	Common, Protected under Cap. 96A		*		*	*				
<i>Phoenix loureirae</i>	刺葵	Shrub or small tree	Common			*				**		
<i>Phyllanthus emblica</i>	餘甘子, 油甘子	Tree	Very common			*						

Ecological and Conservation Importance of Six Sai Kung Country Park Enclaves

Scientific Name	Chinese Common Name	Growth Form	Status and Distribution in HK [^]	Developed / Village Area	Backshore Vegetation	Waste Ground	Shrubby Grassland	Ruderal Area	Natural Watercourse	Secondary Woodland	Mangrove	Fung Shui Woodland [†]
<i>Phytolodium pulchellum</i>	排錢草	Shrub	Very common				*					
<i>Piper cathayanum</i>	青筠	Climber	Restricted									*
<i>Piper hancei</i>	山筠	Climber	Very common									*
<i>Pongamia pinnata</i>	水黃皮	Tree	Common								**	
<i>Praxelis clematidea</i>	假臭草	Herb	Exotic, Very common				**	**				
<i>Psidium guajava</i>	番石榴	Tree	Exotic, Common									**
<i>Psychotria asiatica</i>	九節	Shrub	Very common				*			***		
<i>Pteris blaurita</i>	狭眼鳳尾蕨	Herb	Common							*		
<i>Pteris semipinnata</i>	半邊旗	Herb	Very common							*		
<i>Pteris vittata</i>	蜈蚣草	Herb	Very common				*					
<i>Pueraria lobata</i>	野葛	Climber	Very common				*	**				
<i>Rhodomystus tomentosa</i>	桃金娘	Shrub	Very common				*	*				
<i>Rhus chinensis</i>	鹽膚木	Tree	Common				*					
<i>Rhus hypoleuca</i>	白背鹽膚木	Tree	Common				*					
<i>Rhus succedanea</i>	野漆樹	Tree	Common				*					
<i>Rourea microphylla</i>	小葉紅紫藤、紅紫藤	Woody climber	Common				*			*		
<i>Rubus reflexus</i>	蛇泡勒	Climbing shrub	Very common				*					
<i>Sageretia thea</i>	雀梅藤	Shrub	Common							*		
<i>Sapium discolor</i>	山烏柏	Tree	Very common				*	*				*
<i>Sapium sebiferum</i>	烏柏	Tree	Common				*					*
<i>Sarcandra glabra</i>	草珊瑚	Subshrub	Common							**		
<i>Schefflera heptaphylla</i>	鴨腳木	Tree	Very common							**		



Ecological and Conservation Importance of Six Sai Kung Country Park Enclaves

Scientific Name	Chinese Common Name	Growth Form	Status and Distribution in HK [^]	Developed / Village Area	Backshore Vegetation	Waste Ground	Shrubby Grassland	Ruderal Area	Natural Watercourse	Secondary Woodland	Mangrove	Fung Shui Woodland [†]
<i>Scolopia chinensis</i>	刺楸	Tree	Common								**	
<i>Scolopia saeva</i>	廣東刺楸	Tree	Common							*		
<i>Scoparia dulcis</i>	冰地草	Herb	Common				*					
<i>Solanum torvum</i>	水茄	Shrub	Exotic, Common				*	*				**
<i>Sphenomeris chinensis</i>	烏韭	Herb	Common							*		
<i>Stachytarpheta jamaicensis</i>	假馬鞭	Herb	Exotic, Common				*	*				
<i>Sterculia lanceolata</i>	蚊孺婆	Tree	Very common							**	***	
<i>Syzygium hancei</i>	韓氏蒲桃、紅腺蒲桃	Tree	Common				*			*		
<i>Syzygium jambos</i>	蒲桃	Tree	Exotic, Common				*	*				
<i>Syzygium levinei</i>	山蒲桃	Tree	Common				*					
<i>Tetracera astatica</i>	錫葉藤	Woody climber	Very common				*	*				
<i>Trema tomentosa</i>	山黃麻	Tree	Common				*	*				
<i>Triumfetta rhomboidea</i>	刺刺藤	Subshrub	Common					*		*		
<i>Tylophora ovata</i>	娃兒藤	Slender woody climber	Common					*		*		
<i>Urena lobata</i>	尚梵天花	Subshrub	Common				*	*		*		
<i>Urena procumbens</i>	梵天花	Subshrub	Common				*	*		*		
<i>Uvaria macrophylla</i>	紫玉盤	Woody climber	Common				*	*		*		
<i>Vernonia cinerea</i>	夜香牛	Herb	Very common				*	*		*		
<i>Viburnum odoratissimum</i>	珊瑚樹	Tree	Very common				*	*		*		
<i>Vitex quinata</i>	山杜鵑	Tree	Common				*	*		*		



Scientific Name	Chinese Common Name	Growth Form	Status and Distribution in HK ^a	Developed / Village Area	Backshore Vegetation	Waste Ground	Shrubby grassland	Ruderal Area	Natural Watercourse	Secondary Woodland	Mangrove	Pak Sha O Fung Shui Woodland ^b
<i>Zanthoxylum ailanthoides</i>	椿葉花椒	Tree	Regarded as Rare in Xing et al. (2000), restricted to several locations in HK such as Chek Keng and Tai Long Sai Wan according to AFCD 2008				*					
<i>Zanthoxylum avicennae</i>	雞屎花椒	Tree	Common			*				*		*
<i>Zanthoxylum nitidum</i>	兩面針	Climbing shrub	Very common				*	**		*		*
Total			140				41	25	12	8	57	64

^a Status follows Xing et al. (2000)

^b Code for Abundance: **** = Abundant, *** = Frequent, ** = Occasional, * = Scarce

Table A1-6. Flora species recorded within Pak Sha O enclave

Scientific Name	Chinese Common Name	Growth Form	Status and Distribution in HK ^a	Marsh ^b	Secondary Woodland	Natural Watercourse	Pak Sha O Fung Shui Woodland	Ruderal Area	Seasonally Wet Grassland	Developed / Village Area	Dry Agricultural Land
<i>Abrus mollis</i>	毛相思子	Woody climber	Restricted				*	*			
<i>Achyranthes aspera</i>	土牛膝	Herb	Common								*
<i>Acorus gramineus</i>	石菖蒲	Herb	Very common		**						
<i>Adenostemma lavenia</i>	卜田菊	Herb	Restricted	**							
<i>Adiantum flabellulatum</i>	扇蕨鐵線蕨	Herb	Very common			*	*				
<i>Adina pilulifera</i>	水團花	Tree	Very common		*	**					
<i>Adinandra millenii</i>	黃瑞木	Tree	Common	*							
<i>Alangium chinense</i>	八角楓	Tree	Common		***	**	**			*	
<i>Alocasia macrorrhizos</i>	海芋	Herb	Very common		*	*	*				
<i>Alpinia hainanensis</i>	草豆蔻	Herb	Very common		**	*	*				
<i>Alpinia stachyodes</i>	密枝山薑	Herb	Common		*	*	*				
<i>Anisomeles indica</i>	崗防風	Herb	Common		*						
<i>Anidesma burius</i>	五月茶、五味子	Tree	Common			*					
<i>Antirhea chinensis</i>	毛茶	Small tree	Very common		*						
<i>Aporosa dioica</i>	銀柴	Tree	Very common		**	***	***	*			
<i>Aquilaria sinensis</i>	土沉香	Tree	Common, Protected under Cap. 586, listed as Near Threatened (NT) in the China Plant Red Data Book and is under State protection (Category II) in China (Hu et al. 2003), classified as Critically Endangered (CR) on the IUCN Red List		*	*	*				
<i>Archidendron clypearia</i>	雞耳環	Tree	Common		*		*				

Ecological and Conservation Importance of Six Sai Kung Country Park Enclaves

Scientific Name	Chinese Common Name	Growth Form	Status and Distribution in HK ^a	Marsh ^b	Secondary Woodland	Natural Watercourse	Pak Sha O Fung Shui Woodland	Pak Sha O Fung Shui Woodland	Ruderal Area Pak Sha O Ha Yeung Fung Shui Woodland	Seasonally Wet Grassland	Developed / Village Area	Dry Agricultural Land
<i>Ardisia crenata</i>	大羅傘	Shrub	Common	*	*	**	*					
<i>Ardisia lindleyana</i>	山血丹	Shrub	Common	*								
<i>Ardisia quinquevona</i>	羅傘	Small tree	Very common	**		**	**					
<i>Axonopus compressus</i>	地錢草	Herb	Exotic, Common							***		
<i>Bambusa</i> sp.	竹屬	Bambos	Common	*								
<i>Bauhinia glauca</i>	粉紫半鐘甲，半鐘甲藤	Woody climber	Very common				***					
<i>Bischofia javanica</i>	秋楓	Tree	Common			*						
<i>Blechnum orientale</i>	烏毛蕨	Herb	Very common	**	*	*	**					*
<i>Bohriochloa ischaemum</i>	白茅草	Herb	Common									
<i>Bougainvillea spectabilis</i>	簕杜鵑	Climbing shrub	Exotic, Common							*		
<i>Breynia fruticosa</i>	黑面神	Shrub	Very common	*			*		*			
<i>Bridelia tomentosa</i>	土蜜樹	Tree	Very common	*	*		*					
<i>Brucea javanica</i>	鴉膽子，苦參子	Shrub or tree	Common	**								
<i>Byttneria aspera</i>	刺果藤	Woody climber	Very common	****			***	**				
<i>Cnesalpinia crista</i>	假老虎鬚	Woody climber	Very common	*			*					
<i>Calamus tetradactylus</i>	白藤	Climber	Common			*	*					
<i>Calliandra haenatocephala</i>	紅絨球	Shrub	Exotic, Commonly cultivated							*		
<i>Carex chinensis</i>	中華蘆葦	Herb	Common		*							

Ecological and Conservation Importance of Six Sai Kung Country Park Enclaves

Scientific Name	Chinese Common Name	Growth Form	Status and Distribution in HK ^a	Marsh ^b	Secondary Woodland	Natural Watercourse	Pak Sha O Fung Shui Woodland	Pak Sha O Fung Shui Woodland	Ruderal Area Pak Sha O Ha Yeung Fung Shui Woodland	Seasonally Wet Grassland	Developed / Village Area	Dry Agricultural Land
<i>Catharanthus roseus</i>	長春花	Herb	Exotic, Common							*		
<i>Cayratia corniculata</i>	角花烏蘞莓	Climber	Very common			*						
<i>Centella asiatica</i>	崩大碗	Herb	Very common	*								
<i>Cibotium barometz</i>	金毛狗	Herb	Very common, Protected under Cap. 586, listed as Vulnerable (VU) in the China Red Data Book and is under State protection (category II) in China (Hu <i>et al.</i> 2003)									
<i>Cinnamomum camphora</i>	樟	Tree	Common		*	*	*					
<i>Cinnamomum parthenoxylon</i>	黃樟	Tree	Common		**		***	***				
<i>Cleistanthus nervosum</i>	水翁	Tree	Common		**	**	*					
<i>Clerodendrum chinense</i>	豨薟臭紫葍	Shrub	Common							*		
<i>Colocasia esculenta</i>	芋	Herb	Cultivated	*								**
<i>Commelina diffusa</i>	節節草	Herb	Common	*								*
<i>Coriandrum sativum</i>	芫荽	Herb	Exotic, Cultivated									**
<i>Cratxylum cochinchinense</i>	黃牛木	Tree	Very common		***	*	*	*				
<i>Cyclosorus interruptus</i>	闊葉毛蕨	Herb	Common	**								*
<i>Cyclosorus parasiticus</i>	越南毛蕨	Herb	Very common		**		**	*				
<i>Cyperus compressus</i>	扁穗莎草	Herb	Very common	*								*
<i>Cyperus pilosus</i>	毛軸莎草	Herb	Common	*								*
<i>Cytrococcum patens</i>	弓果藤	Herb	Very common	**	**							**
<i>Dalbergia benthamii</i>	兩廣苦櫨	Woody climber	Common		**		**	*	*			*

Ecological and Conservation Importance of Six Sai Kung Country Park Enclaves

Scientific Name	Chinese Common Name	Growth Form	Status and Distribution in HK ^a	Marsh ^a	Secondary Woodland	Natural Watercourse	Pak Sha O Fung Shui Woodland	Ruderal Area Pak Sha O Ha Yeung Fung Shui Woodland	Seasonally Wet Grassland	Dry Agricultural Land	Developed / Village Area
<i>Albergia hancei</i>	藤黃櫨	Woody climber	Common				*	*			
<i>Amphiphyllum lycinum</i>	牛耳藤	Tree	Common		***		*	*			
<i>Asmodium heterocarpon</i>	假地豆	Subshrub	Very common	*							
<i>Asmos chinensis</i>	假鷹爪	Woody climber	Common				**	*	*		
<i>Cranopteris pedata</i>	芒萁	Herb	Very common		*		*	**	*		
<i>Dioscorea longan</i>	龍眼、柱國	Tree	Exotic, Restricted		*		*	*		*	
<i>Dioscorea bulbifera</i>	黃薺	Climber	Common		*						
<i>Euphyros eriantha</i>	烏桕	Tree	Very common		*		*	*			
<i>Euphyros morrisiana</i>	羅浮桕	Tree	Very common		*		*	*			
<i>Geacnus lauririi</i>	雅柏紫藤、羅氏胡蝶子	Woody climber	Common		*		*	*			
<i>Geacarpus decipiens</i>	杜英	Tree	Common				*				
<i>Geophanthus scaber</i>	地膽草	Herb	Common						**		
<i>Geotherococcus foliatus</i>	白菊	Woody climber	Restricted				*				
<i>Geothia ribes</i>	白花酸藤子	Woody climber	Common					*			
<i>Geothia vestita</i>	密血酸藤子	Woody climber	Common				*				
<i>Geospermum chinense</i>	黃桐	Tree	Restricted		**		**				
<i>Geopremum aureum</i>	綠蘿	Climber	Exotic, Commonly cultivated				*				
<i>Geocaulon truncatum</i>	菲律賓假猪草	Herb	Common	*							

Ecological and Conservation Importance of Six Sai Kung Country Park Enclaves

Scientific Name	Chinese Common Name	Growth Form	Status and Distribution in HK ^a	Marsh ^a	Secondary Woodland	Natural Watercourse	Pak Sha O Fung Shui Woodland	Ruderal Area Pak Sha O Ha Yeung Fung Shui Woodland	Seasonally Wet Grassland	Dry Agricultural Land	Developed / Village Area
<i>Ficus benjamina</i>	垂葉榕	Tree	Exotic, Commonly planted for greening					*			
<i>Ficus hirta</i>	粗葉榕	Shrub	Common		*			*			
<i>Ficus hispida</i>	對葉榕	Tree	Very common		*		*	*			
<i>Ficus microcarpa</i>	細葉榕	Tree	Common				*				
<i>Ficus pumila</i>	薛荔	Climber	Very common						*		
<i>Ficus pyriformis</i>	倒卵榕	Shrub	Common			*					
<i>Fimbristylis sieboldii</i>	綉綉穗拂草	Herb	Common	*							
<i>Flacopa scandens</i>	聚花草	Herb	Common	***		*			*		**
<i>Fuirena umbellata</i>	美蘭草	Herb	Common	**							*
<i>Garcinia oblongifolia</i>	黃牙果	Tree	Very common		*			*			
<i>Geissapiss cristata</i>	雞豆	Herb	Regarded as Rare in Xing <i>et al.</i> (2000), restricted to several locations including Deep Water Bay, Tai Mong Tsai, Sai Keng and Lantau Island according to AFCD 2008	****					**		**
<i>Glochidion eriocarpum</i>	毛果算盤子	Tree	Very common		*		*	*			
<i>Glochidion wrightii</i>	白背算盤子	Tree	Very common					*			
<i>Glochidion zeylanicum</i>	香港算盤子	Shrub	Common	**				***	**		*
<i>Gnerum luofense</i>	羅浮黃麻藤	Climber	Very common, regarded as "Near Threatened" according to IUCN Red List		*	*	*	*			
<i>Hedychnum coronarium</i>	蕺菜	Herb	Exotic, Common			*					
<i>Houttuynia cordata</i>	魚腥草	Herb	Regarded as Very Rare in Xing <i>et al.</i> (2000), restricted to several locations including Lam Tsuen and Sha Lo Tung according to AFCD 2007	**	*						

Ecological and Conservation Importance of Six Sai Kung Country Park Enclaves

Scientific Name	Chinese Common Name	Growth Form	Status and Distribution in HK ^a	Marsh ^a	Secondary Woodland	Natural Watercourse	Pak Sha O Fung Shui Woodland	Pak Sha O Ha Yeung Fung Shui Woodland	Ruderal Area	Seasonally Wet Grassland	Developed / Village Area	Dry Agricultural Land
<i>Hydrocotyle sibthorpioides</i>	天胡荽	Herb	Common	*								*
<i>Hygrophila salicifolia</i>	水蓑衣	Herb	Common	*								
<i>Hypericum japonicum</i>	地耳草	Herb	Very common	*								
<i>Hyperba nitida</i>	夜花藤	Woody climber	Very common					*				
<i>Ilex asprella</i>	梅葉冬青	Shrub	Very common		*		*	*		*		
<i>Impatiens chinensis</i>	佛耳仙	Herb	Common	**								**
<i>Ipomoea cairica</i>	五爪金龍	Herbaceous climber	Exotic, Very common		*	*					*	
<i>Ischaemum barbatum</i>	粗毛狗尾草	Herb	Very common	***								
<i>Kyllinga brevifolia</i>	短葉水蜈蚣	Herb	Common	*						*		*
<i>Kyllinga nemoralis</i>	單穗水蜈蚣	Herb	Very common							*		
<i>Leersia hexandra</i>	李氏禾	Herb	Common	**								*
<i>Lemnaphyllum microphyllum</i>	伏石蕨	Herb	Common				*					
<i>Lepidagathis incurva</i>	鱗花草	Herb	Common		*							
<i>Ligustrum sinense</i>	山指甲	Shrub or small tree	Common		*							
<i>Lindernia oblonga</i>	梭萼母草	Herb	Restricted	**						*		*
<i>Lindernia rotundifolia</i>	迷你虎耳草	Herb	Restricted	*								*
<i>Lindsaea orbiculata</i>	圓葉鱗始蕨	Herb	Very common		*		*					
<i>Liparis ferruginea</i>	銹色羊耳蒜	Herb	Regarded as Scarce and Restricted, and is a locally endangered species (EN) in HK (Barretto <i>et al.</i> 2011)	*								

Ecological and Conservation Importance of Six Sai Kung Country Park Enclaves

Scientific Name	Chinese Common Name	Growth Form	Status and Distribution in HK ^a	Marsh ^a	Secondary Woodland	Natural Watercourse	Pak Sha O Fung Shui Woodland	Pak Sha O Ha Yeung Fung Shui Woodland	Ruderal Area	Seasonally Wet Grassland	Developed / Village Area	Dry Agricultural Land
<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	材皮樟	Tree	Very common		*		*	*				
<i>Lonicera macrantha</i>	大花忍冬	Climber	Common		*							
<i>Lophatherum gracile</i>	淡竹葉	Herb	Very common		*			*				
<i>Lophostemon confertus</i>	紅膠木	Tree	Exotic, Commonly planted		*							
<i>Ludisia discolor</i>	石蒜	Herb	Regarded as infrequent but widespread, and is a locally endangered species (EN) in HK (Barretto <i>et al.</i> 2011)		*							
<i>Ludwigia adscendens</i>	水龍	Herb	Common	*								*
<i>Ludwigia hyssopifolia</i>	草龍	Herb	Common	*								*
<i>Ludwigia octovalvis</i>	毛草龍	Herb	Common	*						*		*
<i>Ludwigia x taiwanensis</i>	台灣水龍	Herb	Exotic, Common	*								*
<i>Lygodium japonicum</i>	海金沙	Climber	Very common		**		*		*			
<i>Lygodium scandens</i>	小葉海金沙	Climber	Common	*	*		*	*	*			
<i>Macaranga tanarius</i> var. <i>tomentosa</i>	血桐	Tree	Common		*							
<i>Machilus breviflora</i>	短序潤楠	Tree	Very common			*						
<i>Machilus chekiangensis</i>	浙江潤楠	Tree	Very common		**	*	***					
<i>Maesa perularia</i>	鯽魚糖	Shrub	Common		**		**	*	*	*		*
<i>Mallotus paniculatus</i>	白楸	Tree	Very common		***		**		*	*		
<i>Mangifera indica</i>	芒果	Tree	Exotic, Commonly planted for fruit								*	
<i>Melastoma malabathricum</i>	野牡丹	Shrub	Common	**	*					*		*
<i>Melastoma sanguineum</i>	毛茛	Shrub	Common		*		*					

Scientific Name	Chinese Common Name	Growth Form	Status and Distribution in HK^	Marsh*	Secondary Woodland	Natural Watercourse	Pak Sha O Fung Shui Woodland	Pak Sha O Fung Shui Woodland	Ruderal Area Pak Sha O Ha Yeung Fung Shui Woodland	Developed / Village Area	Seasonally Wet Grassland	Dry Agricultural Land
<i>elicope pteleifolia</i>	三椏苦	Tree	Common		*			*				
<i>elasma rigida</i>	葉羅子	Tree	Common		*							
<i>ikania micrantha</i>	莨苣菊	Herbaceous climber	Exotic, Very common									*
<i>illettia dielsiana</i>	山雞血藤	Woody climber	Very common		*							
<i>luridaria nudiflora</i>	櫻花水竹葉	Herb	Common	**								*
<i>lussaenda pubescens</i>	玉簪金花	Climbing shrub	Very common		*							
<i>eyraudia reynaudiana</i>	類蕨	Herb	Common		*							
<i>phiorrhiza pumila</i>	短小蛇根草	Herb	Common		*							
<i>alpinhaea cernua</i>	陸地蜈蚣, 塔蘭草	Creeping herb	Very common	**								
<i>andanus austrosinensis</i>	露兜草	Herb	Common			**	*	*				
<i>anicum brevifolium</i>	短葉黍	Herb	Very common	**	*							
<i>anicum dichotomiflorum</i>	水生黍	Herb	Common	**								
<i>anicum repens</i>	舖地黍/粘香草	Herb	Very common	**								
<i>aspalum conjugatum</i>	兩耳草	Herb	Exotic, Common	*								
<i>aspalum scrobiculatum</i> at. <i>orbiculare</i>	四果雀稗	Herb	Very common									*
<i>avetta hongkongensis</i>	香港大沙蕨	Shrub or small tree	Common, Protected under Cap. 96A		*	*	*	*	**			
<i>phlydrum lanuginosum</i>	田蔥	Herb	Common	**								
<i>phoenix loureiroi</i>	刺葵	Shrub or small tree	Common		*	*	*					

Scientific Name	Chinese Common Name	Growth Form	Status and Distribution in HK^	Marsh*	Secondary Woodland	Natural Watercourse	Pak Sha O Fung Shui Woodland	Pak Sha O Fung Shui Woodland	Ruderal Area Pak Sha O Ha Yeung Fung Shui Woodland	Seasonally Wet Grassland	Developed / Village Area	Dry Agricultural Land
<i>Piper cathayanum</i>	骨節	Climber	Restricted		**		*		*			
<i>Pogostemon auricularius</i>	水珍珠草	Herb	Common	**						*		**
<i>Polygonum barbatum</i>	毛蓼	Herb	Common	**								*
<i>Polygonum glabrum</i>	光蓼	Herb	Restricted									*
<i>Polygonum pubescens</i>	短毛蓼	Herb	Common	**						**		**
<i>Pathus chinensis</i>	石柑	Epiphytic climber	Very common			*	*					
<i>Pronephrium simplex</i>	單葉新月蕨	Herb	Very common		*							
<i>Psidium guajava</i>	番石榴	Tree	Exotic, Common							*		
<i>Psychotria asiatica</i>	九節	Shrub	Very common		***	*	***	**	*		*	
<i>Psychotria serpens</i>	蔓九節	Semi-woody climber	Very common					*				
<i>Pteris semipinnata</i>	半邊旗	Herb	Very common		**	**	**	*	*			
<i>Quisqualis indica</i>	使君子	Woody climber	Restricted								*	
<i>Rhaphiolepis indica</i>	車輪梅	Shrub or small tree	Very common			*					*	
<i>Rhodomyrtus tomentosa</i>	桃金娘	Shrub	Very common		*							
<i>Rhus hypoleuca</i>	白背鹽膚木	Tree	Common		*							
<i>Rhus succedanea</i>	野漆樹	Tree	Common		**		*					
<i>Rourea microphylla</i>	小葉紅基藤, 紅基藤	Woody climber	Common		*			*				
<i>Rubus leucanthus</i>	白花懸鈎子	Climbing shrub	Common		*							

Ecological and Conservation Importance of Six Sai Kung Country Park Enclaves

Scientific Name	Chinese Common Name	Growth Form	Status and Distribution in HK ^a	Marsh ^b	Secondary Woodland	Natural Watercourse	Pak Sha O Fung Shui Woodland	Pak Sha O Fung Shui Woodland	Ruderal Area Pak Sha O Ha Yeung Fung Shui Woodland	Seasonally Wet Grassland	Developed / Village Area	Dry Agricultural Land
<i>Rubus reflexus</i>	蛇泡藤	Climbing shrub	Very common		*		*					
<i>Sacciolepis indica</i>	蕨類草	Herb	Very common	*								*
<i>Sageretia thea</i>	雀梅藤	Shrub	Common		*		*					
<i>Salvia plebeia</i>	荔枝草、雪見草	Herb	Restricted	*						**		
<i>Sapium discolor</i>	山烏柏	Tree	Very common				*					
<i>Sapium sebiferum</i>	烏柏	Tree	Common		*		*			**		
<i>Sarcandra glabra</i>	草珊瑚	Subshrub	Common		*		*	*				
<i>Saurauia tristyla</i>	水東哥	Tree	Common		*	**	*					
<i>Schefflera heptaphylla</i>	鴨腳木	Tree	Very common		**		***	***				
<i>Scelopora saeva</i>	廣東刺蝟	Tree	Common		*		*	*				
<i>Senna alata</i>	翅莢決明	Shrub	Exotic, Common							*		
<i>Smilax china</i>	金剛藤	Climbing shrub	Very common					*				
<i>Smilax glabra</i>	土茯苓、光葉菝葜	Climbing shrub	Very common				*	*				
<i>Smilax lanceifolia</i> var. <i>apaca</i>	暗色菝葜	Climbing shrub	Common		*			*				
<i>Sphaerocaryum malaccense</i>	樟葉	Herb	Common	***								**
<i>Sphenomeris chinensis</i>	烏韭	Herb	Common		*		*	*				
<i>Spilanthes paniculata</i>	金銀扣	Herb	Common	*					*			*
<i>Stephania longa</i>	千金藤	Climber	Common		*							
<i>Sterculia lanceolata</i>	假刺楸	Tree	Very common		**		***	*				

Ecological and Conservation Importance of Six Sai Kung Country Park Enclaves

Scientific Name	Chinese Common Name	Growth Form	Status and Distribution in HK ^a	Marsh ^b	Secondary Woodland	Natural Watercourse	Pak Sha O Fung Shui Woodland	Pak Sha O Fung Shui Woodland	Ruderal Area Pak Sha O Ha Yeung Fung Shui Woodland	Seasonally Wet Grassland	Developed / Village Area	Dry Agricultural Land
<i>Strophanthus divaricatus</i>	羊角拗	Woody climber	Common		*							
<i>Symplocos cochinchinensis</i> var. <i>laurina</i>	黃牛奶樹	Tree	Common	*	*		***					
<i>Symplocos glauca</i>	辛舌樹	Tree	Common		*							
<i>Symplocos lanceifolia</i>	光葉山欖	Tree	Common				*					
<i>Symplocos sumuntia</i>	山欖	Tree	Restricted		*							
<i>Syzygium hancei</i>	韓氏蒲桃	Tree	Common		*		*					
<i>Syzygium jambos</i>	蒲桃	Tree	Exotic, Common		*		*	*				
<i>Syzygium levinei</i>	山蒲桃	Tree	Common		*		*	*				
<i>Tectaria subtriphylla</i>	叉蕨	Herb	Common				*					
<i>Tetracera asiatica</i>	狗骨藤	Woody climber	Very common		**		*					
<i>Triumfetta rhomboides</i>	刺刺藤	Subshrub	Common							**		
<i>Tylophora ovata</i>	絲兒藤	Slender woody climber	Common		*							
<i>Urena lobata</i>	肉蓯蓉	Subshrub	Common	*						**		*
<i>Urena procumbens</i>	梵天花	Subshrub	Common	*						**		*
<i>Utricularia bifida</i>	挖耳草	Small herb	Common	*								*
<i>Uvaria macrophylla</i>	紫玉盤	Woody climber	Common		*		*	*				
<i>Viburnum odoratissimum</i>	珊瑚樹	Tree	Very common		***		**	**		**		
<i>Wikstroemia nutans</i>	細軸莢花	Shrub	Common		*		*	*				

Ecological and Conservation Importance of Six Sai Kung Country Park Enclaves

Scientific Name	Chinese Common Name	Growth Form	Status and Distribution in HK ^a	Marsh ^b	Secondary Woodland	Natural Watercourse	Pak Shu O Farm Shui Woodland	Pak Shu O Farm Woodland	Ruderal Area Pak Shu O Ha Yeung	Grassland	Seasonally Wet Area	Developed / Village	Dry Agricultural Land
<i>Iris pauciflora</i>	蘆葦	Herb	Restricted	*									
<i>Anthoxylum avicennae</i>	絲花根	Tree	Common		*			*					
<i>Anthoxylum nitidum</i>	兩面針	Climbing shrub	Very common		**		*	*	*				
total			200	53	100	26	77	66	15	22	15		36

Status follows Xing et al. (2000)
Code for Abundance: ****= Abundant, *** = Frequent, ** = Occasional, * = Scarce

Appendix 2. Avian Species Recorded or Predicted to Occur in the Enclave Habitats

Table A2-1. Avian species recorded (1) or predicted to occur (P) in the habitats.

Habitats: FSW - Fung Shui & Secondary Woodland; SHG - Shrubland / Grassland; GRA - Grassland; DAL - Dry Agricultural Land; SWG - Seasonally Wet Grassland; MAR - Marsh; PON - Pond; NWA - Natural Watercourse; MAN - Mangrove; BVG - Backshore Vegetation; RUD - Ruderal; DVA - Developed / Village Area; WGR - Waste Ground.

English Name	Scientific Name	Conservation Status	FSW	SHG	GRA	DAL	SWG	MAR	PON	NWA	Sea	MAN	BVG	RUD	DVA	WGR
Chinese Francolin	<i>Francolinus pintadeanus</i>			1	1											
Japanese Quail	<i>Coturnix japonica</i>				P											
Malayan Night Heron	<i>Gorsachius melanolephus</i>		P													
Black-crowned Night Heron	<i>Nycticorax nycticorax</i>	(LC)					1	1	1			1	1			
Striated Heron	<i>Butorides striata</i>	(LC)							P			P				
Chinese Pond Heron	<i>Ardeola bacchus</i>	PRC(RC)					1	1	1			1	1			
Eastern Cattle Egret	<i>Bubulcus coromandus</i>						1	1								
Grey Heron	<i>Ardea cinerea</i>	PRC									1	1	1			
Great Egret	<i>Ardea alba</i>	PRC(RC)									1	1	1			
Intermediate Egret	<i>Egretta intermedia</i>		1					1								
Little Egret	<i>Egretta garzetta</i>	PRC(RC)		1												
Pacific Reef Heron	<i>Egretta sacra</i>												1			
Black Baza	<i>Aviceda leuphotes</i>		1													
Crested Honey Buzzard	<i>Pernis ptilorhynchus</i>	LC	1													
Black Kite	<i>Milvus migrans</i>	(RC)		1	1	1	1	1	1				1	1	1	1
White-bellied Sea Eagle	<i>Haliaeetus leucogaster</i>	(RC)	1								1	1	1			
Crested Serpent Eagle	<i>Spilornis cheela</i>	(LC)	1	1												
Crested Goshawk	<i>Accipiter trivirgatus</i>		1	1												
Chinese Sparrowhawk	<i>Accipiter soloensis</i>	P	P													
Japanese Sparrowhawk	<i>Accipiter gularis</i>		1	1												
Besra	<i>Accipiter virgatus</i>		1	1												
Eastern Buzzard	<i>Buteo japonicus</i>			P	P	P	P	P	P							
Bonelli's Eagle	<i>Aquila fasciata</i>	(RC)	1													
Common Kestrel	<i>Falco tinnunculus</i>			1	1	1										
Amur Falcon	<i>Falco amurensis</i>		1													
Eurasian Hobby	<i>Falco subbuteo</i>		1													

English Name	Scientific Name	Conservation Status	FSW	SHG	GRA	DAL	SWG	MAR	PON	NWA	Sea	MAN	BVG	RUD	DVA	WGR
Peregrine Falcon	<i>Falco peregrinus</i>	(LC)		1	1	1	1	1	1							
White-breasted Waterhen	<i>Amaurornis phoenicurus</i>			1				1	1	1		1	1			
Eurasian Woodcock	<i>Scolopax rusticola</i>		1	1			1	1								
Common Sandpiper	<i>Actitis hypoleucos</i>										P	P	P			
Oriental Turtle Dove	<i>Streptopelia orientalis</i>		1	1												
Spotted Dove	<i>Spilopelia chinensis</i>		1	1		1			1				1	1	1	1
Common Emerald Dove	<i>Chalcophaps indica</i>		1	1												
Greater Coucal	<i>Centropus sinensis</i>			P	P											
Lesser Coucal	<i>Centropus bengalensis</i>			P	P											
Chestnut-winged Cuckoo	<i>Clamator coromandus</i>		1	1												
Asian Koel	<i>Eudynamis scolopacea</i>		1	1											1	
Large Hawk Cuckoo	<i>Hierococyx sparverioides</i>		1													
Hodgson's Hawk Cuckoo	<i>Hierococyx nisticolar</i>		1	1												
Indian Cuckoo	<i>Cuculus micropterus</i>			1											1	
Oriental Cuckoo	<i>Cuculus optatus</i>		1	1												
Collared Scops Owl	<i>Otus letia</i>		1	1												
Eurasian Eagle Owl	<i>Bubo bubo</i>	RC			P											
Brown Fish Owl	<i>Ketupa zeylonensis</i>	RC	1						1		1	1				
Grey Nightjar	<i>Caprimulgus jotaka</i>	LC	1													
Savanna Nightjar	<i>Caprimulgus affinis</i>			1	1											
Pacific Swift	<i>Apus pacificus</i>	(LC)	1	1	1	1	1	1	1	1	1	1	1	1	1	1
House Swift	<i>Apus nipalensis</i>		1	1	1	1	1	1	1	1	1	1	1	1	1	1
Oriental Dollarbird	<i>Eurostomus orientalis</i>		1	1												
White-throated Kingfisher	<i>Halcyon smyrnensis</i>	(LC)						P	P	P	P	P	P			
Black-capped Kingfisher	<i>Halcyon pileata</i>	(LC)						1			1	1	1			
Common Kingfisher	<i>Alcedo atthis</i>									1	1	1	1			
Eurasian Hoopoe	<i>Upupa epops</i>			P	P											
Black-winged Cuckooshrike	<i>Corucina melaschistos</i>		1													
Ashy Minivet	<i>Pericrocotus divaricatus</i>		1													

Ecological and Conservation Importance of Six Sai Kung Country Park Enclaves

English Name	Scientific Name	Conservation Status	FSW	SHG	GRA	DAL	SWG	MAR	PON	NWA	Sea	MAN	BVG	RUD	DVA	WGR
Grey-chinned Minivet	<i>Pericrocotus solaris</i>	LC	P													
Scarlet Minivet	<i>Pericrocotus speciosus</i>		1													
Tiger Shrike	<i>Lanius tigrinus</i>	P														
Bull-headed Shrike	<i>Lanius bucephalus</i>			1	1											
Brown Shrike	<i>Lanius cristatus</i>			1	1	1										
Long-tailed Shrike	<i>Lanius schach</i>			1	1	1									1	
White-bellied Erpomis	<i>Erpomis zantholeuca</i>	LC	1													
Black-naped Oriole	<i>Oriolus chinensis</i>	LC	P													
Black Drongo	<i>Dicrurus macrocerus</i>			1												
Ashy Drongo	<i>Dicrurus leucophaeus</i>	LC	P													
Hair-crested Drongo	<i>Dicrurus hottentotus</i>		1	1												
Black-naped Monarch	<i>Hypothymis azurea</i>		1	1												
Asian Paradise-Flycatcher	<i>Terpsiphone paradisi</i>	LC	1													
Japanese Paradise-Flycatcher	<i>Terpsiphone atrocaudata</i>	NT,LC	1													
Red-billed Blue Magpie	<i>Urocissa erythrorhynchos</i>			1												
Grey Treepie	<i>Dendrocitta formosae</i>	LC	1	1												
Collared Crow	<i>Corvus torquatus</i>	NT,LC								P		P	P			
Large-billed Crow	<i>Corvus macrorhynchos</i>		1	1												
Grey-headed Canary-flycatcher	<i>Culicicapa ceylonensis</i>		1													
Cinereous Tit	<i>Parus cinereus</i>		1	1												
Red-whiskered Bulbul	<i>Pycnonotus jocosus</i>		1	1	1	1	1	1	1	1		1	1	1	1	1
Chinese Bulbul	<i>Pycnonotus sinensis</i>		1	1	1	1	1	1	1	1		1	1	1	1	1
Sooty-headed Bulbul	<i>Pycnonotus aurigaster</i>			1	1	1										
Chestnut Bulbul	<i>Hemixos castanonotus</i>		1	1												
Barn Swallow	<i>Hirundo rustica</i>		1	1	1	1	1	1	1	1		1	1	1	1	1
Pygmy Wren-babbler	<i>Phoenicogyna pusilla</i>		1													
Mountain Tailorbird	<i>Phyltergates cuculatus</i>		1													
Japanese Bush Warbler	<i>Horornis diphona</i>			1												

Ecological and Conservation Importance of Six Sai Kung Country Park Enclaves

English Name	Scientific Name	Conservation Status	FSW	SHG	GRA	DAL	SWG	MAR	PON	NWA	Sea	MAN	BVG	RUD	DVA	WGR
Manchurian Bush Warbler	<i>Horornis borealis</i>			1												
Brown-flanked Bush Warbler	<i>Horornis fortipes</i>		1													
Asian Stubtail	<i>Urosphena squameiceps</i>		1	1												
Dusky Warbler	<i>Phylloscopus fuscatus</i>			1		1	1									
Radde's Warbler	<i>Phylloscopus schwarzi</i>			1												
Chinese Leaf Warbler	<i>Phylloscopus yunnanensis</i>		1													
Pallas's Leaf Warbler	<i>Phylloscopus proregulus</i>		1	1											1	
Yellow-browed Warbler	<i>Phylloscopus inornatus</i>		1	1									1		1	
Hume's Leaf Warbler	<i>Phylloscopus humei</i>		1													
Arctic Warbler	<i>Phylloscopus borealis</i>		1	1												
Japanese Leaf Warbler	<i>Phylloscopus xanthodryas</i>		1	1												
Two-barred Warbler	<i>Phylloscopus plumbeitarsus</i>		1													
Pale-legged Leaf Warbler	<i>Phylloscopus tenellipes</i>		1	1												
Sakhalin Leaf Warbler	<i>Phylloscopus borealoides</i>		1	1												
Eastern Crowned Warbler	<i>Phylloscopus coronatus</i>		1	1												
Goodson's Leaf Warbler	<i>Phylloscopus goodsoni</i>		1	1												
Sulphur-breasted Warbler	<i>Phylloscopus ricketti</i>		P													
White-spectacled Warbler	<i>Seiurus affinis</i>		P													
Manchurian Reed Warbler	<i>Acrocephalus tangorum</i>	VU	1					1						1		
Russet Bush Warbler	<i>Locustella mandelli</i>			1	1											
Yellow-bellied Prinia	<i>Prinia flaviventris</i>			1	1	1	1	1						1	1	1
Plain Prinia	<i>Prinia inornata</i>				P											
Common Tailorbird	<i>Orthotomus sutorius</i>		1	1	1	1			1					1	1	1
Streak-breasted Scimitar Babbler	<i>Pomatiorhinus ruficollis</i>		1													
Rufous-capped Babbler	<i>Stachyridopsis ruficeps</i>	LC	1													
Chinese Hwamei	<i>Garrulax canorus</i>			1												
Masked Laughingthrush	<i>Garrulax perspicillatus</i>		1	1											1	

Ecological and Conservation Importance of Six Sai Kung Country Park Enclaves

English Name	Scientific Name	Conservation Status	FSW	SHG	GRA	DAL	SWG	MAR	PON	NWA	Sea	MAN	BVG	RUD	DVA	WGR
Greater Necklaced Laughingthrush	<i>Garrulax pectoralis</i>		1	1												
Black-throated Laughingthrush	<i>Garrulax chinensis</i>		1	1												
Blue-winged Minla	<i>Minla cyanouroptera</i>		1													
Chestnut-collared Yuhina	<i>Yuhina castaneiceps</i>	LC	1													
Chestnut-flanked White-eye	<i>Zosterops erythropleurus</i>		1													
Japanese White-eye	<i>Zosterops japonicus</i>		1	1											1	
Crested Myna	<i>Acridotheres cristatellus</i>			1	1	1						1	1	1	1	1
Red-billed Starling	<i>Spydiopsar sericeus</i>	LC		1	1	1										
Black-collared Starling	<i>Gracupica nigricollis</i>			1										1	1	1
Blue Whistling Thrush	<i>Myophonus caeruleus</i>		1													
Orange-headed Thrush	<i>Geokichla citrina</i>	LC	1													
Siberian Thrush	<i>Geokichla sibirica</i>		1													
White's Thrush	<i>Zonthera aurea</i>		1	1												
Grey-backed Thrush	<i>Turdus hortulorum</i>		1	1									1		1	
Japanese Thrush	<i>Turdus cardis</i>		1	1											1	
Common Blackbird	<i>Turdus merula</i>		1	1												
Eyebrowed Thrush	<i>Turdus obscurus</i>		1	1												
Pale Thrush	<i>Turdus pallidus</i>		1	1												
Brown-headed Thrush	<i>Turdus chrysolaus</i>		1													
Dusky Thrush	<i>Turdus eunomus</i>	LC		1		1										
Lesser Shortwing	<i>Brachypteryx leucophris</i>	LC	1	1												
Siberian Rubythroat	<i>Luscinia caliope</i>			1												
Siberian Blue Robin	<i>Luscinia cyane</i>		1													
Rufous-tailed Robin	<i>Luscinia sibilans</i>		1	1												
Red-flanked Bluetail	<i>Tarsiger cyanurus</i>		1	1												
Oriental Magpie Robin	<i>Copsychus saularis</i>		1	1									1	1	1	1
Daurian Redstart	<i>Phoenicurus auroreus</i>			1		1										

Ecological and Conservation Importance of Six Sai Kung Country Park Enclaves

English Name	Scientific Name	Conservation Status	FSW	SHG	GRA	DAL	SWG	MAR	PON	NWA	Sea	MAN	BVG	RUD	DVA	WGR
Stejneger's Stonechat	<i>Saxicola stejnegeri</i>			1	1	1	1	1	1					1	1	1
Grey Bush Chat	<i>Saxicola ferreus</i>			1	1											
Blue Rock Thrush	<i>Monticola solitarius</i>			1									1			
Grey-streaked Flycatcher	<i>Muscicapa griseisticta</i>		1													
Dark-sided Flycatcher	<i>Muscicapa sibirica</i>		1													
Asian Brown Flycatcher	<i>Muscicapa dauurica</i>		1	1												
Ferruginous Flycatcher	<i>Muscicapa ferruginea</i>	P														
Yellow-rumped Flycatcher	<i>Ficedula zanthopygia</i>	P														
Narcissus Flycatcher	<i>Ficedula narcissina</i>		1	1												
Mugimaki Flycatcher	<i>Ficedula mugimaki</i>		1													
Red-throated Flycatcher	<i>Ficedula albicilla</i>			1												
Blue-and-white Flycatcher	<i>Cyanoptila cyanomelana</i>		1													
Verditer Flycatcher	<i>Eumylas thalassinus</i>		1	1												
Hainan Blue Flycatcher	<i>Cyornis hainanus</i>		1	1												
Small Niltava	<i>Niltava macgrigoriae</i>		1													
Orange-bellied Leafbird	<i>Chloropsis hardwickii</i>	LC	1													
Fire-breasted Flowerpecker	<i>Dicaeum ignipectus</i>		1	1												
Scarlet-backed Flowerpecker	<i>Dicaeum cruentatum</i>		1	1											1	
Mrs. Gould's Sunbird	<i>Aethopyga gouldiae</i>	P														
Pink-tailed Sunbird	<i>Aethopyga christinae</i>		1	1												
Eurasian Tree Sparrow	<i>Passer montanus</i>			1	1	1								1	1	1
White-rumped Munia	<i>Lonchura striata</i>			1											1	
Scaly-breasted Munia	<i>Lonchura punctulata</i>			1	1										1	
Forest Wagtail	<i>Dendronanthus indicus</i>	P														
Grey Wagtail	<i>Motacilla cinerea</i>						1	1	1	1						
White Wagtail	<i>Motacilla alba</i>					1	1	1	1	1						
Richard's Pipit	<i>Anthus richardi</i>			1	1	1								1		1
Olive-backed Pipit	<i>Anthus hodgsoni</i>		1	1		1								1	1	
Chinese Grosbeak	<i>Euphonia migratoria</i>		1	1												

Ecological and Conservation Importance of Six Sai Kung Country Park Enclaves

English Name	Scientific Name	Conservation Status	FSW	SHG	GRA	DAL	SWG	MAR	PON	NWA	Sea	MAN	BVG	RUD	DVA	WGR
Tristram's Bunting	<i>Emberiza tristrami</i>		I	I												
Chestnut-eared Bunting	<i>Emberiza fucata</i>			P	P											
Little Bunting	<i>Emberiza pusilla</i>				P	P										
Yellow-browed Bunting	<i>Emberiza chrysophrys</i>			P	P											
Yellow-breasted Bunting	<i>Emberiza aureola</i>	VU,RC			I	I		I								
Chestnut Bunting	<i>Emberiza rutila</i>		P	P												
Black-faced Bunting	<i>Emberiza spodocephala</i>			I	I	I		I	I				I			

Key:

U – Vulnerable; NT – Near-threatened. These conservation status assessments are provided by IUCN.

C – Local Concern; [P]RC – [Potential] Regional Concern. Letters in parentheses () indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites, rather than in general occurrence. These conservation status assessments are based on Fellowes *et al.* (2002).

About KFBG

Kadoorie Farm and Botanic Garden (KFBG) is situated in the rural New Territories, on the northern slopes of Tai Mo Shan, Hong Kong's highest mountain. Two steep spurs enclose its deep-set valley. Within KFBG are streams, woodlands, orchards, vegetable gardens, walking trails, live animal exhibits, floral exhibits, sustainable agriculture demonstration plots, art exhibits, a wild animal rescue centre, a native tree nursery, and, other conservation and education facilities.

In the post-war years, Hong Kong was flooded with destitute refugees. Many had traditional knowledge of crop production and livestock farming but no stock, others had land but no experience. They required support to rebuild their lives. The farm site at Pak Ngau Shek was established in 1956 as a base for livestock breeding and distribution, agricultural research, farmers training, public education and recreation. The barren slopes were terraced and planted with orchards and vegetable gardens. The development of the botanic garden began in 1963 and the plant conservation programme from 1972.

On 20th January, 1995, the Legislative Council of Hong Kong passed an Ordinance (Chapter 1156) incorporating KFBG as a non-profit corporation designated as a conservation and education centre. It is a unique public-private partnership, for while the KFBG Corporation is a public organisation, it is privately funded by the Kadoorie Foundation.

Since 1995, KFBG has been conducting a wide range of nature education, nature conservation and sustainable living programmes both on-site, and, throughout Hong Kong and South China.

In this time of severe global crisis KFBG raises awareness, undertakes rigorous science-based species conservation and ecosystem restoration, and offers new ways of thinking and living to respond to the world's problems. Hence, our work brings hope and improvement by focusing on nature conservation, sustainable living and holistic education that re-connects people with nature. By working together with the public, Governments, academia, NGOs and businesses, we can protect our common future.

Our mission is to harmonise our relationship with the environment. Our vision is a world in which people live sustainably with respect for each other and nature.

赤徑發展規劃建議大綱:-

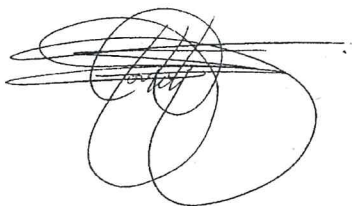
- (一) 將原來按過往以 300 呎的鄉村界線圖(紅色 VE 界線修訂, 於棄了很多本應可建丁屋的土地, 更為了不想像一些政府地申請丁屋, 經村民商討後現修訂之小型鄉村發展區向右邊較為平整又沒有太多樹木的村民私有地段紳延, 成為 V-Zone 在圖上以黃色為 Proposed V-Zone 根據赤徑村村代表於 12-11-2014 向大埔地政處提交的一份最新的赤徑原居民人口調查, 本村現有原居民男丁約二百人, 而暫時未夠十八歲, 但在未來十年間以最保守估計也有約八十人左右. 因此, 倘以 DPA 的鄉村屋宇規劃, 只能建約十間丁屋左右, 實不足以現有需求, 因此, 把該鄉村用地擴在這右邊是較為合適的.
- (二) 在圖中間以斜線之物業及空地是一間二級歷史文物的教堂, 而村民也不想在其前後左右有任何發展, 故該區本已被規劃為 V-Zone 用地, 但實質也不能使用, 故放棄該區並希望列為 CA 既可保育又可以保護該現有二級歷史文物.
- (三) 位於圖右邊以紫紅色的平也是較為平坦地建議為 GIC 用途, 該地區建議為老人中心及傷殘協會的旅遊中心. 而另一處位於後山也同樣以紫紅色的地段也建議為 GIC 可用作建設一所環保及有機耕種的大學.
- (四) 圖左手邊以青綠色標示, 建議為 RECREATION 康樂用地, 把赤徑村打造成為一個有特色的東西馬

爾代夫旅遊及民宿渡假勝地.

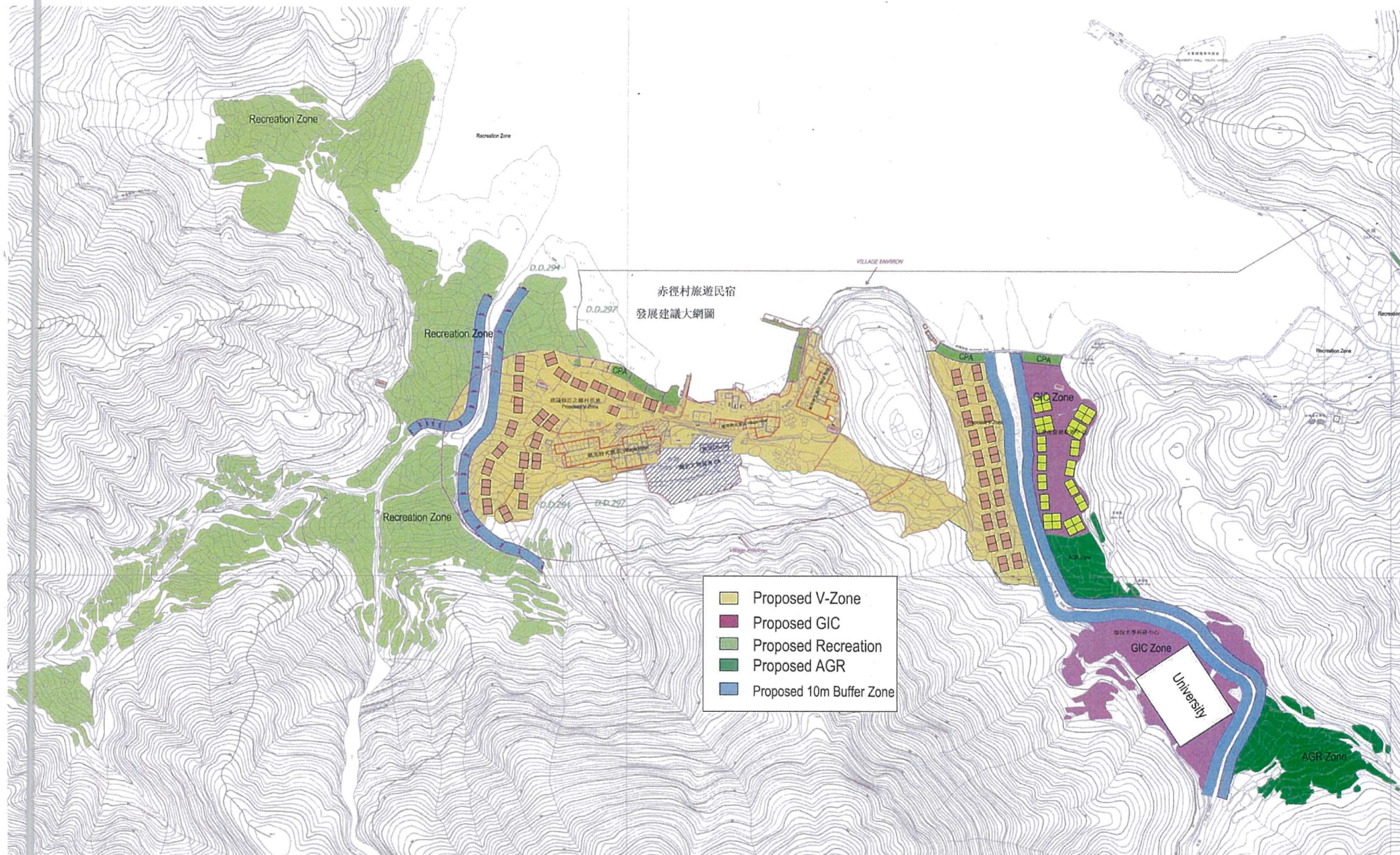
- (五) 圖的左右兩邊均有一條溪流, 為了保育, 在河流兩邊預留 10 米緩衝區, 以淺藍色標示, 務使河流不受污染.
- (六) 在本村建設造中央生化污水處理系統及保留 10 米距離河流為非建築區.使赤徑不致於受污染.
- (七) 離海岸 10 米作為海岸保護區.
- (八) 重建現有舊屋發展為低密度酒店.

這是赤徑發展規劃的臨時建議, 詳情將待環評專家對林木及生態評估後, 將會於 12 月底前提交一份更詳細的發展報告書.

此致



潘麒元
赤徑村發展顧問
12-11-2014



城市規劃委員會
沙田政府合署 14 樓
Attn: Mr. David Tam

事宜：委託赤徑村發展規劃顧問確認書
西貢北約赤徑村
DPA/NE-CK/1

敬啟者，

本人范房生，乃赤徑村之村代表，茲就城規會有關本村所草擬上述主題的發展審批圖，現以書面確認委託潘麒元先生為本村之總規劃及發展顧問，全權代表本村草擬，規劃及研究並授權代表本村出席一切有關本村與任何政府部門就城市規劃委員會有關部門就制定本村現有 DPA 及將來所發出的 OZP 圖的一切會議，包括有權代表本村草擬及制定本村發展報告書等等，此外，潘先生與另一位助手江智祥先生均可代本村出席及參與任何與城規會的會議。

特此確認



范房生
赤徑村代表
14-11-2014

**Planning Assessments on the Development Proposals
Received in the Course of Preparation of the Plan**

Development Proposals

1. On 7.10.2014, Kadoorie Farm & Botanic Garden Corporation (KFBG) made a submission to Planning Department (PlanD) which includes a report on “Ecological and Conservation Importance of Six Sai Kung Country Park Enclaves” and land use proposal for the Area (**Appendix V**). According to KFBG’s submission, the woodlands, watercourses and riparian zones, mangroves and backshore vegetation, and riparian grasslands in the Chek Keng study area¹ are of high conservation importance and should be covered by an appropriate land use zoning such as the “CA” zone under the planning system. No development incompatible with surrounding areas or the natural heritage of these areas should be authorized. From the ecological and nature conservation perspectives, due to the strong ecological and functional linkages, the Chek Keng Country Park Enclave is very much part of the Country Park system, and thus the Government should consider incorporating it, or areas of high conservation importance therein, into the Country Park.
2. A meeting with the Indigenous Inhabitant Representative (IIR) of Chek Keng Village and his consultants was conducted on 5.11.2014 to briefly exchange views on their preliminary land use proposals. On 13.11.2014, the IIR of Chek Keng Village submitted a preliminary land use proposal to PlanD (**Appendix VI**). He considers that the area of the “V” zone in the DPA Plan is insufficient to meet the Small House demand and proposes to expand the “V” zone to the east and west along the two natural streams. Other preliminary land use proposals mainly include: (i) three clusters of village hotels in the proposed “V” zone; (ii) the proposed “G/IC” zone on both sides of the eastern stream for a tourism facility for the seniors and disabled and a university specialized in environmental protection and organic farming; (iii) the proposed “Agriculture” zone along the eastern side of the eastern stream; (iv) the proposed “Recreation” zone in the western part of the Area for holiday resorts; (v) the proposed “CA” zone for the Holy Family Chapel and its immediate environs; (vi) two strips of 10m-wide “CPA” zone near the two small piers along the coast; (vii) 10m-wide buffer zone on both sides of the two natural streams; and (viii) a central sewage treatment system for the Area. The IIR indicates that he would submit a detailed report including development proposals as well as tree and ecological appraisals in due course.

¹ This also covers the area 50m from the boundary of the Country Park Enclave.

Planning Assessment

Natural Environment

3. Surrounded by the Sai Kung East Country Park on three sides and comprising mainly woodlands, shrublands, grasslands, streams, sandy/rocky shore with cliff, backshore vegetation and mangroves, the Area forms part of the wider natural environment of the Country Park. MacLehose Trail traverses the Area from east to west, largely dividing the lower seaside area mainly with natural coastline and features to its north from the higher landside area with a village cluster and vegetated slopes/valleys to its south.
4. To the north (sea side) of MacLehose Trail is mainly the lower coastal area comprising sandy/rocky shore, stream estuaries and areas covered with backshore vegetation, and further to the north are mangroves in the intertidal mudflat straddling the edge of the Area and the sea. The intertidal mudflat supports seven species of mangroves including the uncommon *Heritiera littoralis* (銀葉樹) and a high diversity of mangrove fauna. Backshore vegetation largely extends from the intertidal mudflat southward to the MacLehose Trail and westward along the coast, forming a transition between the mangroves and the woodland. Dominant flora species include the *Paliurus ramosissimus* (馬甲子), *Hibiscus tiliaceus* (黃槿) and *Cerbera manghas* (海杧果). The backshore vegetation areas are ecologically linked with mangroves and provide habitats for Sesarmino Crabs². There is a protruding vegetated knoll in the eastern section of the coastal front which is flanked by a cliff along the southern side of MacLehose Trail.
5. It is proposed to zone the above areas as “Coastal Protection Area” (“CPA”) in order to conserve, protect and retain the natural coastlines and the sensitive coastal natural environment. It can also provide a buffer between the adjoining village area and the marine environment.
6. Except for the village cluster and some Government, Institution or Community (GIC) facilities, the Area to the south of MacLehose Trail mainly comprises woodlands, shrublands, grasslands and streams. The abandoned agricultural land on both sides of the two natural streams are currently mainly covered by woodland in the upper sections, whereas patches of shrubland and grassland are found in the lower sections. The woodland is ecologically-linked to the natural habitats in the Country Park and supports protected plant species, such as *Aquilaria sinensis* (土沉香) and *Cibotium barometz* (金毛狗). Uncommon plant species such as *Zanthoxylum ailanthoides* (椿葉花椒) and *Zoysia sinica* (中華結縷草) have also been found in the Area. The two natural streams in the eastern and western parts of the Area flow through the valleys from south to north into the sea. There is neither *fung shui* woodland nor Ecologically Important Stream (EIS) in the Area, and the terrestrial habitats consist largely of common native plant species. Having consulted AFCD, it is proposed to zone

² The diversity of Sesarmino Crabs is indicative to the “intactness” of the mangrove ecosystem.

the above areas as “Green Belt” (“GB”) in order to provide a buffer between the village type developments and the Country Park and to conserve the natural and rural character of the Area.

7. With respect to KFBG’s submission, the AFCD in general has no objection to the ecological information in it, and agrees that natural coasts, woodlands, natural streams and their riparian zones should preferably be covered with conservation zonings.

Village Development

8. From the nature conservation perspective, any direct or indirect impacts to the ecological and landscape resources within the Country Park Enclave and at the adjacent Sai Kung East Country Park, as well as to its natural and rural character, should be avoided.
9. There is a recognized village, namely Chek Keng, in the Area. Thus there is a need to designate “V” zone at suitable locations to meet the Small House demand of local villagers after delineating the areas that have to be conserved.
10. Given the natural environment, its ecological and landscape value coupled with its limited accessibility due to lack of vehicular access, an incremental approach for designation of “V” zone for Small House development has been adopted with an aim to confining Small House development at suitable locations so as to avoid undesirable disturbances to the natural environment and overtaxing the limited infrastructure in the Area. Discounting the surrounding environmentally sensitive areas, including coastal area, woodland and streams which should be protected, a total of about 2.24 ha of land mainly covering the existing village cluster and its adjoining area has been reserved for Small House development.