

Appendix D
Landscape Design Proposal

VOLUME 1

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VOLUME 2

EXISTING TREE PHOTOGRAPHS

A.1 INTRODUCTION

- A.1.1 This report contains a landscape proposal including a Tree Preservation Scheme and Compensatory Planting Proposal for a Section 12A Application for Optimisation of Land Use in Discovery Bay In Support of mixed-use Development at Discovery Bay Area 10b (hereafter referred to as the "Application Site"). This report outlines the landscape design proposals for the Proposed Development at the Application Site.
- A.1.2 This landscape design proposal is submitted to demonstrate the effect of the building design of the Proposed Development at the Application Site on the landscape and visual aspects. It includes an assessment of existing trees and a description of the landscape layout and proposed planting to establish a coherent character for the future development and integrate it within the environs. The landscape proposal provides a concept to enhance the Proposed Development and its contribution to the existing landscape context.

A.2 EXISTING SITE CONDITIONS

- A.2.1 **Context/ General Neighbourhood** - The Proposed Application Site is located on the south western waterfront of Peninsula Village, approximately 500m south of Discovery Bay ferry Pier. The Application Site is bounded by Discovery Bay Road, Peninsula Village Phase 3 and Discovery Bay Marina Club to the north and east and Nim Shue Wan waterfront to the south and east.
- A.2.2 **The Site** -The Application Site is elongated in shape and covers an area of approximately 62,970m². The site is predominantly reclaimed land with existing levels ranging from +4.1 mPD to +5.5 mPD. The northern edge of the site consists of artificial slopes rising to meet the existing landform of Peninsula Village. The general landscape character within the Application Site is that of a supporting service area with overnight parking areas for buses, golf cart repair workshops, warehousing, bus repair facilities, a refuse collection station, a petrol station, a marina boat servicing yard and a sewerage treatment pump. The southern edge of the site is an artificial waterfront and supports ferry embarkation, docking facilities and marine crane access. The slopes at the back of the site parallel with Discovery Bay Road have dense planting. There are also scattered trees in groups of varying density throughout the Application Site.

A.3 PROPOSED DEVELOPMENT FORM

- A.3.1 **Building Layout** - The Proposed Development consists of a podium at the back of the site parallel with the slopes supporting one 18-storey residential building at the north western end and a row of 4-6 storey residential buildings. At the south eastern end of the site is another 18-storey residential building and four residential buildings with building heights of 6 to 12 domestic storeys. The waterfront is lined with 3-4 storey houses with piers and informal recreational spaces. A petrol station is sited at the northern end of the site near the junction with Discovery Bay Road.
- A.3.2 **Circulation** - There will be two vehicular access points to the Application Site from the existing Discovery Bay Road, one serving the ground floor level and one serving the podium level. Internal driveways extend from the accesses to serve residential blocks and ferry piers.

A.4 TREE PRESERVATION SCHEME

A.4.1 Tree Survey Findings

11nos. individual trees and 10nos. of tree groups have been surveyed within the application site boundary. The most frequently occurring species are *Bridelia tomentosa*, *Ficus hispida*, *Ficus*

microcarpa, *Macaranga tanarius* var. *tomentosa*, *Mallolus paniculatus* and *Melaleuca cajuputi* ssp. *cumingiana*. The condition of the trees ranges from poor to good and most are of low to medium amenity value. The Tree Survey plan and Tree Assessment Schedule are provided in Appendix A. Tree Photographs are provided in Volume 2. The tree numbers are summarised in Table A1 below.

Table A.1 – Summary of Tree Numbers

Individual Trees	Total
• T54	1
• T55	1
• T56	1
• T58	1
• T59	1
• T60	1
• T61	1
• T62	1
• T63	1
• T77	1
• T110	1
TOTAL	11
Tree Groups	Total
• TG1	7
• TG2	88
• TG3	20
• TG4	1
• TG5	30
• TG6	33
• TG7	29
• TG8	30
• TG9	116
• TG10	66
TOTAL	420

No rare or protected species listed under Forestry Regulations (Cap. 96 Forestry and Countryside Ordinance sub. leg.) were found within the Site. No "Old and Valuable Trees" or "Champion Trees", as defined in "Registration of Old and Valuable Trees" (ETWB TC(W) No. 29/2004) and in the book "Champion Trees in Urban Hong Kong" respectively, were found.

A. 4.2 Proposed Treatment of Existing Trees

Affected Individual Trees – 10nos. of the 11nos individual trees within the Application Site will be affected by the proposed development and are proposed to be felled or transplanted.

Affected Tree Groups – 9nos. of the 10nos. tree groups within the Application Site will be wholly or partially affected by the proposed development and the affected trees within them are proposed

to be felled or transplanted. Trees on the slopes at the back of the site (TG8) and trees at the north-west corner of the site (TG9) will be largely retained.

Tree Figures – The summary of proposed treatment of existing trees is shown in Table A2 below:-

Table A.2 – Summary of Treatment of Existing Tree

Individual Trees	Trees to be Retained	Trees to be Felled	Trees to be Transplanted	Total
• T54	0	1	0	1
• T55	0	1	0	1
• T56	0	1	0	1
• T58	0	1	0	1
• T59	0	1	0	1
• T60	0	0	1	1
• T61	0	1	0	1
• T62	0	0	1	1
• T63	0	0	1	1
• T77	1	0	0	1
• T110	0	1	0	1
TOTAL	1	7 (Girth = 7.85m)	3	11
Tree Groups	Trees to be Retained*	Trees to be Felled*	Trees to be Transplanted*	Total
• TG1	0	4	3	7
• TG2	0	44	44	88
• TG3	0	10	10	20
• TG4	0	1	0	1
• TG5	0	30	0	30
• TG6	29	4	0	33
• TG7	25	4	0	29
• TG8	21	9	0	30
• TG9	76	40	0	116
• TG10	43	23	0	66
TOTAL	194	169 (Girth = 98.71m)	57	420

* Note: Figures for Retain, Fell and Transplant Tree Groups are estimates only.

Transplanting Method - All trees will be transplanted in "one-go" to onsite final receptor locations not only to ensure a high survival rate of the trees, but also to maintain good form and high amenity value after transplanting.

A.4.3 Compensatory Planting Proposal

Compensatory trees will consist of heavy-standard trees with a mean girth of 0.4m. Estimated total aggregate girth size of the 169 existing trees to be felled within this Application Site is 106.56m. Therefore a minimum of 267 compensatory trees with an aggregate girth of 106.8m (267 x 0.4) will

be provided to provide a compensatory ratio of 1:1 by quality and quantity. The tree species to be planted are outlined in the Landscape Design section below. It is considered that the proposed development has space to accommodate receptor sites for the proposed transplanted trees and the compensatory planting.

A.5 LANDSCAPE DESIGN

A.5.1 *The Landscape Design has been developed to:*

- (i) To ensure the landscape character is consistent with the overall design language and aesthetic of the architectural elements and the surrounding landscape context;
- (ii) To ensure the Proposed Development is sensitively integrated into the surrounding areas via appropriate interface treatments;
- (iii) To minimise the visual impact of the Proposed Development through sensitive landscape treatment;
- (iv) To create suitable outdoor spaces for passive recreational activities for future residents and visitors; and
- (v) To promote biodiversity within the development through the use of indigenous plant species where possible and exotic ornamental species where appropriate.

A.5.2 *General Concept Design*

A.5.2.1 Proposed Comprehensive Residential Development - The general concept is to create a distinctive residential neighbourhood with connections to surrounding residential areas and landscape assets. The overall design layout and allocation of the building heights is planned to create a stepped progression down from the back slopes of the site to the Nim Shue Wan waterfront. The higher building blocks are situated close to the north and eastern part of the site while the low rise buildings are located along the Nim Shu Wan waterfront. The tallest tower blocks are sited in the northwest and east "landward" portion of the site adjacent to the backdrop of Peninsula Village whilst the lower tower blocks occupy the south eastern portion and step progressively down in height from 18 to 6 storeys on the flat "seaward" tip of the site. Naturalistic planting with indigenous species is proposed along the site boundaries to enhance the green rural fringe character of the area. A large open space is planned at the eastern end of the site of the Proposed Development as a focal recreational resource for the new neighborhood. This will provide a central "garden" and cater for communal passive outdoor activities and enhance the overall greening of the development. Efficient circulation for standard and emergency access is provided by EVA access roads and generous planting along these will create a green spine and reduce the visual prominence of the roads. The overall design seeks to maximize opportunities for greening and communal open space and integrate the development into the existing residential environment.

A.5.3 *Major Landscape Elements [Refer to Landscape Master Plan in Appendix A]*

A.5.3.1 Landscape at Main Entrances – The vehicle access to the proposed development podium will be from the existing Discovery Bay Road to the podium level and to the ground level areas at the existing junction with Marina Avenue. Both entrances form first impressions of the neighborhood and will be designed to create a distinctive arrival experience. The upper entrance will be framed by the existing mature avenue tree planting along Discovery Bay Road and will be enhanced with signature shrub planting. The lower level entrance will be marked by twin water features either side of the entrance and amenity tree and shrub planting. This will also screen the sewage pumping station and the petrol station.

- A.5.3.2 Pedestrian Environment** - Extensive soft landscape will be implemented along access roads and walkways to enhance the interior circulation spaces. A mix of ornamental and indigenous trees with an understory of multi-layered planting will provide functional benefits of shade and screening and visual and sensory amenity. Planting will provide color and texture to the streetscape and generally soften the appearance of the pavement as well as adjacent building walls. Lighting will be carefully selected to be non-intrusive and reinforce a consistent design character throughout the pedestrian environment of the overall development.
- A.5.3.3 Waterfront Environment** – A public promenade will be provided along the waterfront. This will be cantilevered over the water at a lower level than the adjacent residential developments in order to protect the privacy of residents and provide closer interaction with the bay. There are 2 quayside landing points proposed along the waterfront. These comprise the ferry pier for public kaido access and goods delivery located at the south eastern end of the Application Site and a mooring area for the tall ship "Bounty" at the central area of the waterfront. Each of the quaysides is to be designed with a distinctive landscape character merging with the open space behind to promote public access. The public pier area will provide an attractive waterfront venue for waiting for the ferry and for general relaxation. The "Bounty Pier" will incorporate a small maintenance workshop which will be screened by amenity planting and a viewing bridge. The waterfront will be attractively landscaped to encourage public viewing of the historic replica ship.
- A.5.3.4 Recreational Facilities and Communal Garden** - Passive and active recreational facilities will be incorporated within the communal garden at the eastern end of the site. A large central lawn will create space for relaxation and informal activities. Children's play and informal exercise areas with proprietary fixed equipment will be incorporated around the central open space. Garden style planting will be provided to create intimate settings for informal use by all residents. Planting will be selected to provide seasonal interest and will comprise a mixture of native and ornamental species to enhance the biodiversity of the development.
- A.5.3.5 Peripheral Planting and Boundary Treatment** - The northern boundary of the site will retain existing trees on the slopes and these will be enhanced with new tree and shrub planting. This will help mitigate the intrusion of Discovery Bay Road on the units built at podium level. The boundary with the Marina Club will also be densely planted in order to maintain screening and privacy for club members. Entrance planting at the north western end of the site will be undertaken to enhance existing vegetation and create a strong arrival experience. The western and southern edge of the development will be defined by the low rise residential units. These will incorporate front gardens facing Nim Shue Wan which will be planted and greened by their residents. The two quayside areas will include tree planting to frame the spaces and screen them from the adjacent properties.

A.5.4 Landscape Softworks Design

- A.5.4.1 Planting Strategy** – Structure planting shall compliment the adjacent semi-natural vegetation and will help ameliorate the local micro-climate, contribute to pollution and noise mitigation, improve energy efficiency of buildings through insulation effects and provide wildlife habitats. Species selection will relate to the particular landscape character in each area. Peripheral naturalistic buffer planting will adopt mainly native species. Pedestrian circulation network amenity planting will be more formal in style and include exotic species chosen for flower and foliage colour, seasonal variation and form. Communal gardens and landscape corridors will be more informal in planting

style and will include indigenous species common to the area and exotic trees and shrubs will be used to provide colour, fragrance, visual structure and variety.

A.5.4.2 Proposed Planting Schedule – A preliminary indicative palette of plant materials is provided in Table A.3:

Table A.3 Proposed Planting Palette

ABB	SCIENTIFIC NAME	CHINESE COMMON NAME	PROPOSED SIZE	SPACING (mm)
TREES				
BAU.BLA.	<i>Bauhinia blakeana</i> *)	洋紫荊	Heavy Standard	4000
CAM.JAP.	<i>Camelia japonica</i>	山茶花	Heavy Standard	3000
CIN.BUR.	<i>Cinnamomum burmannii</i> *)	陰香	Heavy Standard	4000
ELA.API.	<i>Elaeocarpus chinensis</i> *)	中華杜英	Heavy Standard	4500
FIC.BEN.	<i>Ficus benjamina</i>	垂榕	Heavy Standard	4000
HIB.TIL.	<i>Hibiscus tiliaceus</i>	大黃花	Heavy Standard	4000
JUN.CHI.	<i>Juniperus chinensis</i>	龍柏	Heavy Standard	3000
OSM.FRA.	<i>Osmanthus fragrans</i>	桂花	Heavy Standard	3000
PLU.RUB.	<i>Plumeria rubra</i>	雞蛋花	Heavy Standard	4000
POD.MAC.	<i>Podocarpus macrophyllus</i> *)	羅漢松	Heavy Standard	3000
SYZ.HAN.	<i>Syzygium hancei</i> *)	韓氏蒲桃	Heavy Standard	4500
SHRUBS				
BOU.SPE.	<i>Bougainvillea spectabilis</i>	賀春紅	varies	varies
COD.VAR.	<i>Codiaeum variegatum</i>	灑金榕	varies	varies
DRA.MAR.	<i>Dracaena marginata tricolor</i>	三色鐵樹	varies	varies
DUR.REP.	<i>Duranta repens</i>	金蓮翹	varies	varies
GAR.JAS.	<i>Gardenia jasminoides</i> *)	梔子	varies	varies
GOR.AXI.	<i>Gordonia axillaris</i> *)	大頭茶	varies	varies
HIB.ROS.	<i>Hibiscus rosa - sinensis</i>	黃花大紅花	varies	varies
IXO.CHI.	<i>Ixora chinensis</i> *)	龍船花	varies	varies
LIG.SIN.	<i>Ligustrum sinense</i> *)	山指甲	varies	varies
RHO.SIM.	<i>Rhododendron simsii</i> *)	紅杜鵑	varies	varies
OSM. FRA	<i>Osmanthur fragrans</i>	桂花 台灣赤楠	varies	varies
GROUND COVER				
LIR.SPI.	<i>Liriope spicata</i> *)	花葉蒲草	varies	varies
NEO.NID.	<i>Neottopteris nidus</i> *)	雀巢芒	varies	varies
ZEP.CAN.	<i>Zephyranthes candida</i>	玉簫	varies	varies

*) Native species

A.5.5 Soil Depth – All planting areas at grade and on structure shall be provided with the following minimum soil depths excluding the drainage layers:

Tree/ Palm Tree	1200mm
Shrubs	600mm
Groundcovers	300 – 600mm
Turf	300mm

A.5.6 Barrier Free Access – All landscape areas will be designed and detailed according to the current version of BD's Design Manual – Barrier Free Access.

A.5.7 Landscape Area Provision

Communal Open Space - The total Application Site area is approx. 62,875m² with a designed population of 2,813. With the total open space area provided within the development of at least 2,900m², the minimum standard of 10 ha per 100,000 persons as stipulated in Chapter 4 of the Hong Kong Planning Standards and Guidelines, will be achieved.

Greenery Provision – The greenery area provision for the proposed development is summarised in Table A.4 as follow:-

Table A.4 Greenery Area Provision

Description	Area (approx. m ²)
Application Site Area	62,875
Greening Requirement (30% of Site Area)	18,862.50
Site Greenery Coverage*	18,900

*According to PNAP-(APP152)

The total greenery area is approximately 18,900m². Compared with the total site area, the percentage of green area provided within the development shall be approximately 30.06% which satisfies the 30% requirement of PNAP (APP-152).

Figure A – Tree Assessment

Figure A.1 Tree Schedule

*Figure A.2 Tree Group and Individual Tree
Survey Plan (PT30/10B/P/TS01.dwg)*

*Figure A.3 Tree Treatment Plan
(PT30/10B/P/TS02.dwg)*

Address Discovery Bay Site 10B
 Lot N/A in D.O. N/A
 Prepared by Pure Wong on Dec-14
 Field Survey was conducted/updated on Nov-14
 To be read in conjunction with drawing nos. PT30/10B/P/TS01 Rev. 0

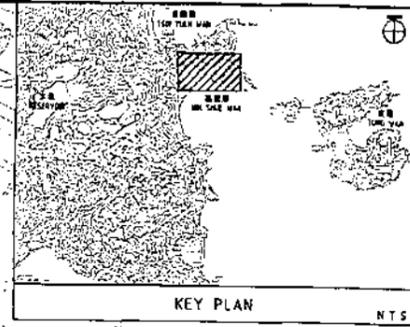
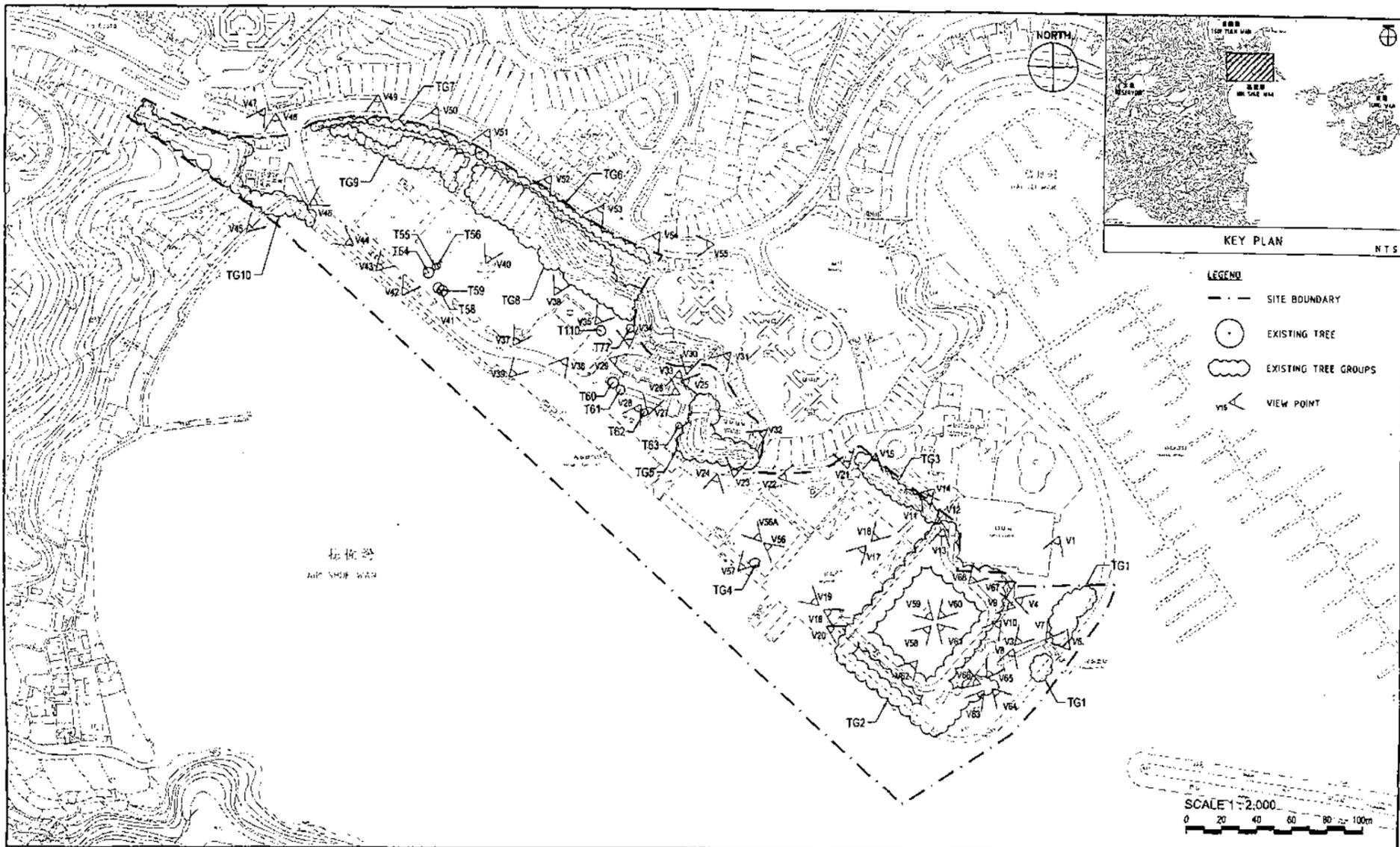
S12A Discovery Bay Optimisation Of Land Use – Refinement Of Area 10B

Urbis Limited

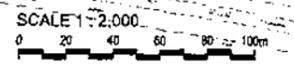
Existing Tree Assessment Schedule (Individual Tree)

Rev. 0

Tree ID Number	Tree Species (in botanical name)	Chinese Name	Tree Size			Form	Health Condition	Relative Value	Anticipated Survival Rate	Proposed Treatment	Justification for Proposed Tree Removal	Remarks
			Overall Height (m)	Trunk Diameter (cm)	Average Diameter (cm)							
T54	<i>Casuarina equisetifolia</i>	木麻黃	10	500	6	Fair	Fair	Med	Low	Fell	-	Conflict with Proposed Development
T55	<i>Schefflera heptaphylla</i>	國草棧	5	100	3.5	Fair	Fair	Med	Low	Fell	-	Conflict with Proposed Development Growing very close to T56
T56	<i>Schefflera heptaphylla</i>	國草棧	5	200	3.5	Fair	Fair	Med	Low	Fell	-	Conflict with Proposed Development Growing very close to T55
T58	<i>Casuarina equisetifolia</i>	木麻黃	13	700	6	Fair	Fair	Med	Low	Fell	-	Conflict with Proposed Development
T59	<i>Casuarina equisetifolia</i>	木麻黃	15	500	6	Fair	Fair	Med	Low	Fell	-	Conflict with Proposed Development
T60	<i>Magnolia grandiflora</i>	荷花玉蘭	6	300	6	Fair	Fair	Med	Med	Transplant	-	-
T61	<i>Magnolia grandiflora</i>	荷花玉蘭	5	300	5	Fair	Fair	Med	Med	Fell	-	Conflict with Proposed Development Adjacent to culvert.
T62	<i>Magnolia grandiflora</i>	荷花玉蘭	5	300	4	Fair	Fair	Med	Med	Transplant	-	-
T63	<i>Magnolia grandiflora</i>	荷花玉蘭	4.5	200	3.5	Fair	Fair	Med	Med	Transplant	-	-
T77	<i>Ficus hispida</i>	對葉榕	4	200	4.5	Fair	Fair	Med	Low	Retain	-	-
T110	<i>Macaranga tanarius</i> var. <i>tomentosa</i>	血桐	5	200	5.5	Fair	Fair	Med	Low	Fell	-	Conflict with Proposed Development

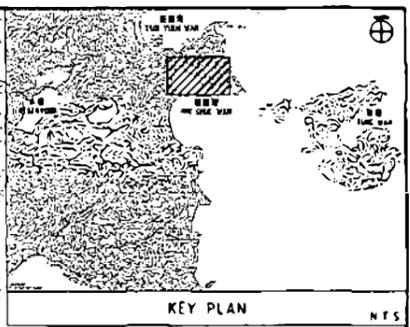
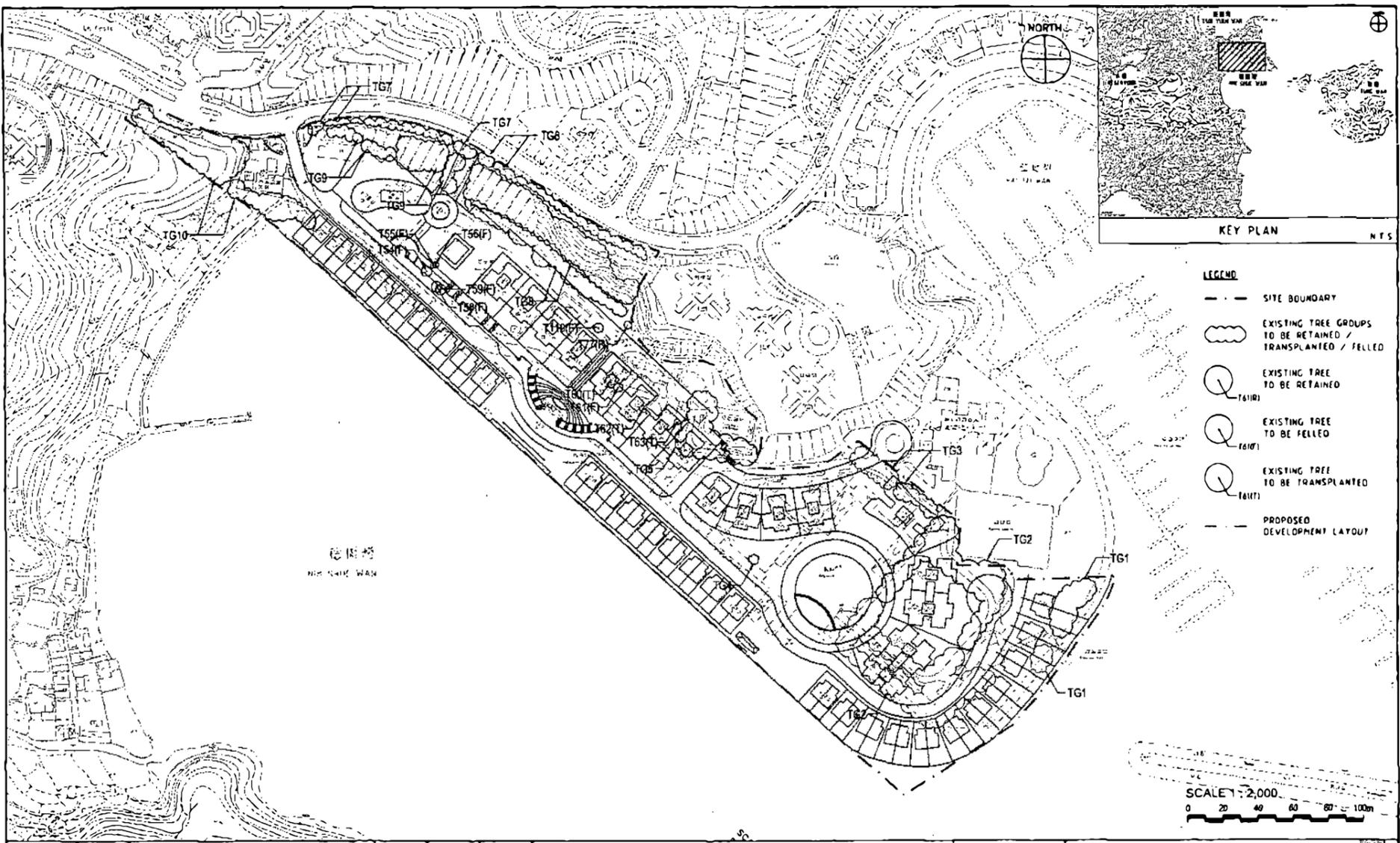


- LEGEND**
- SITE BOUNDARY
 - EXISTING TREE
 - ⊖ EXISTING TREE GROUPS
 - V1-V38 VIEW POINT

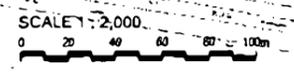


				Job Title				Drawing No.							
				DISCOVERY BAY OPTIMIZATION OF LAND USE - REFINEMENT OF AREA 10B				PT30/10B/P/TS01							
				Drawing Title				Scale							
				TREE GROUPS AND INDIVIDUAL TREE SURVEY PLAN				1:2000 (A3)							
Revision	Date	Description	Drawn by	Checked by	Approved by	Drawn by	El	Checked by	DK	Approved by	TD	Date	NOV 2015	Job. No.	PT30

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 UDS Limited, 11/F Su On Centre, 188 Lockhart Road, Wan Chai, Hong Kong, Tel: 2822 3333 Fax: 2822 8662



- LEGEND**
- SITE BOUNDARY
 - ⊖ EXISTING TREE GROUPS TO BE RETAINED / TRANSPLANTED / FELLED
 - EXISTING TREE TO BE RETAINED (T551F)
 - EXISTING TREE TO BE FELLED (T561F)
 - EXISTING TREE TO BE TRANSPLANTED (T571F)
 - PROPOSED DEVELOPMENT LAYOUT

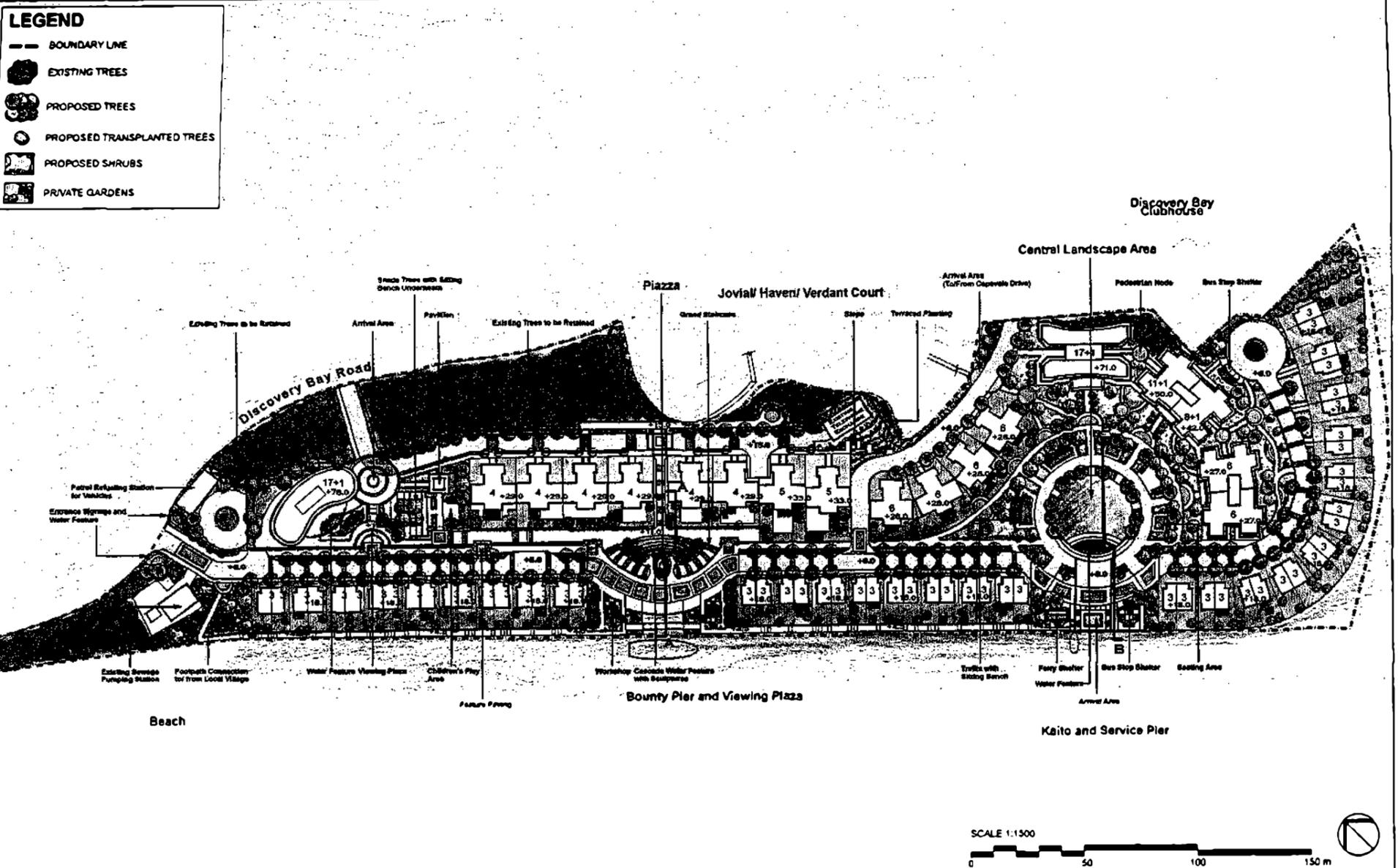


				Job Title				Drawing No.							
				DISCOVERY BAY OPTIMIZATION OF LAND USE - REFINEMENT OF AREA 10B				PT30/10B/P/TS02							
				Drawing Title				Scale							
				TREE TREATMENT PLAN				1:2000 (A3)							
Revision	Date	Description	Drawn by	Checked by	Approved by	Drawn by	El	Checked by	DK	Approved by	TD	Date	NOV 2015	Job. No.	PT30

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Figure B – Landscape Design

Figure B.1 Landscape Master Plan
 Figure B.2 Landscape Section A-A
 Figure B.3 Landscape Section B-B



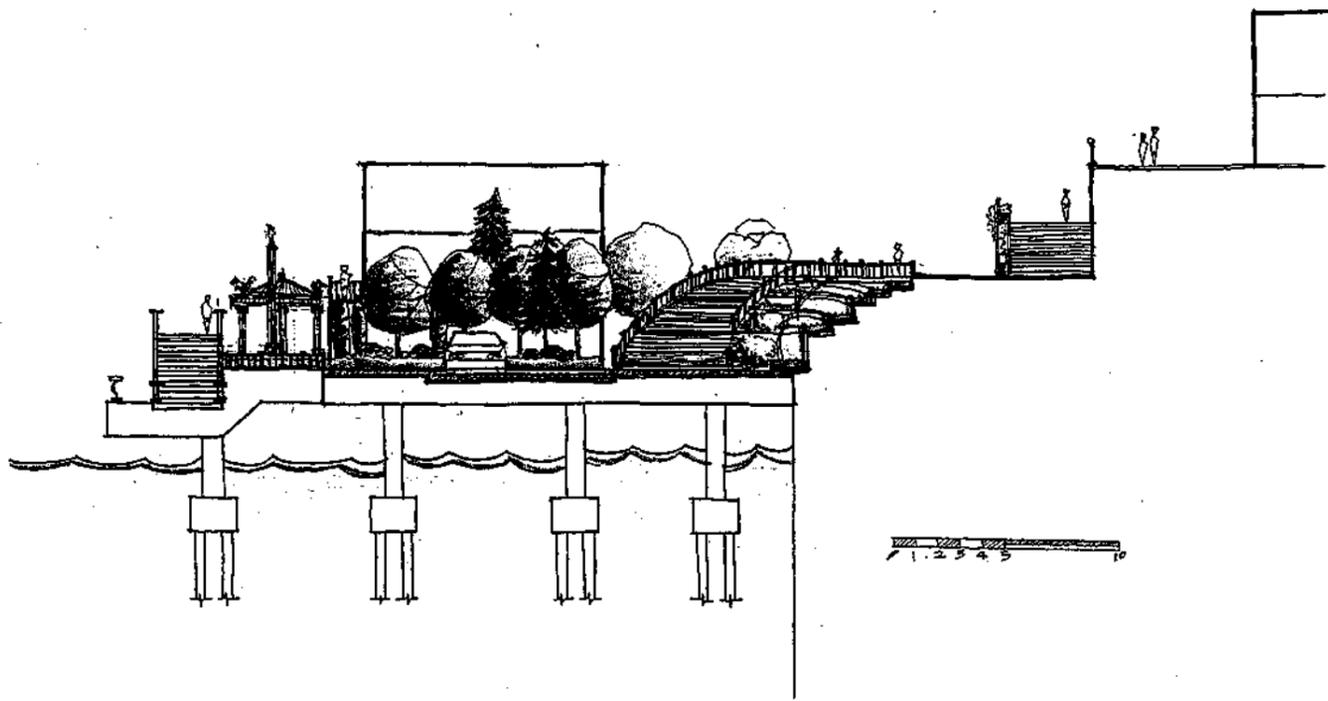
LEGEND

- BOUNDARY LINE
- EXISTING TREES
- PROPOSED TREES
- PROPOSED TRANSPLANTED TREES
- PROPOSED SHRUBS
- PRIVATE GARDENS



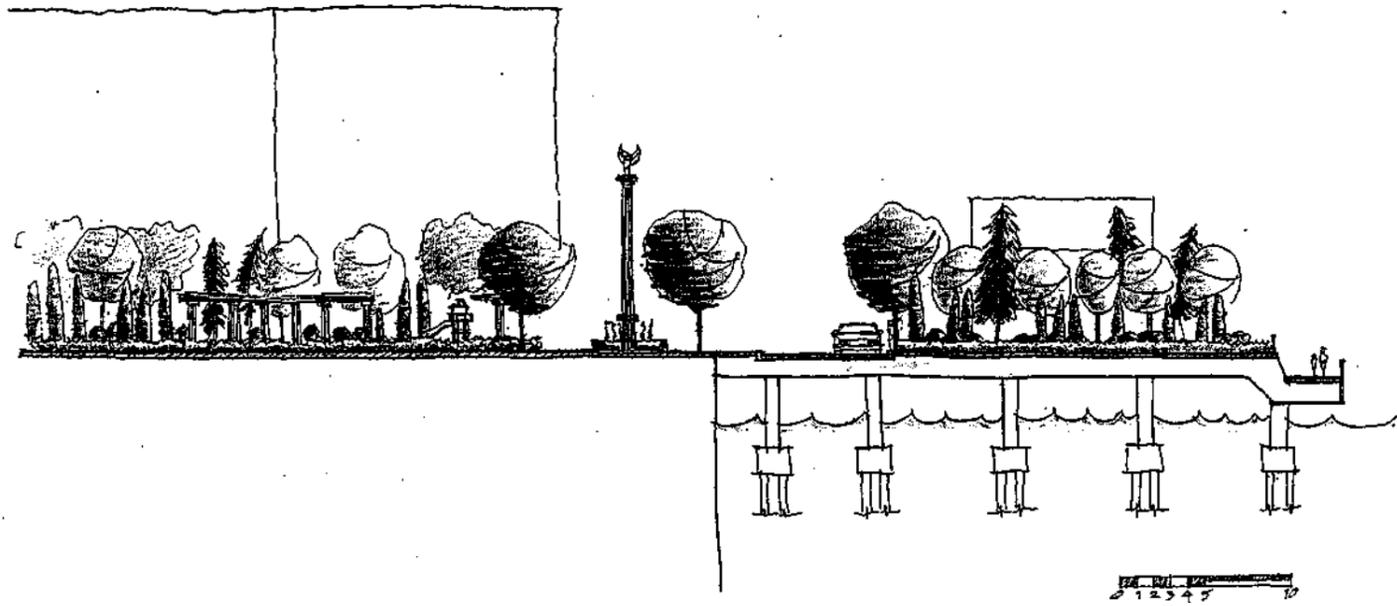
UBIZ TITLE: **LANDSCAPE MASTER PLAN** PROJECT: **DISCOVERY BAY OPTIMIZATION OF LAND USE - AREA 10B**

FIGURE: **B.1** DEC 2015



TITLE: **LANDSCAPE SECTION A-A**
 PROJECT: **DISCOVERY BAY OPTIMIZATION OF LAND USE - AREAS 10B**

DEC 2015
 FIGURE: **B.2**



TITLE: **LANDSCAPE SECTION B-B**
 PROJECT: **DISCOVERY BAY OPTIMIZATION OF LAND USE - AREA 10B**

DEC 2015
 FIGURE: **B.3**

Existing Tree Photographs

VOLUME 2



T54 | Fell



T54 | Fell



T55 | Fell



T55 | Fell



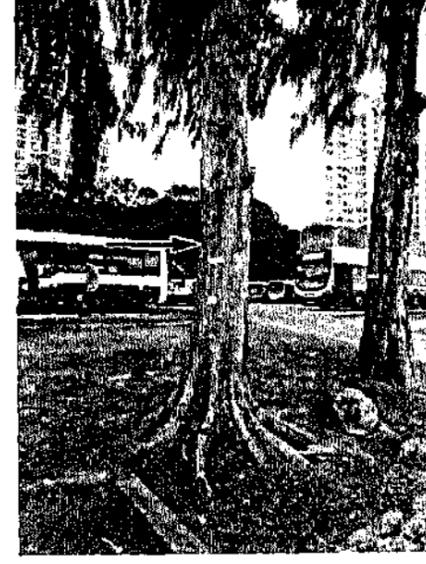
T56 | Fell



T56 | Fell



T58 | Fell



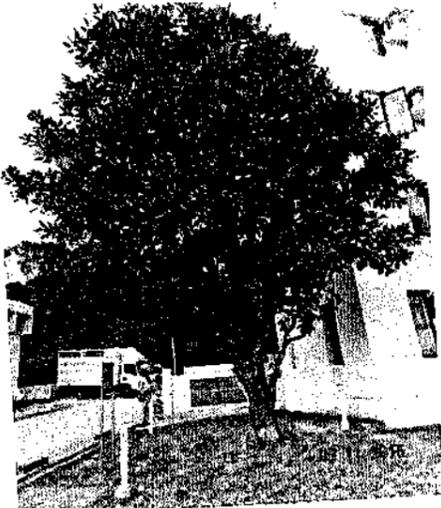
T58 | Fell



T59 | Fell



T59 | Fell



T60 | Transplant



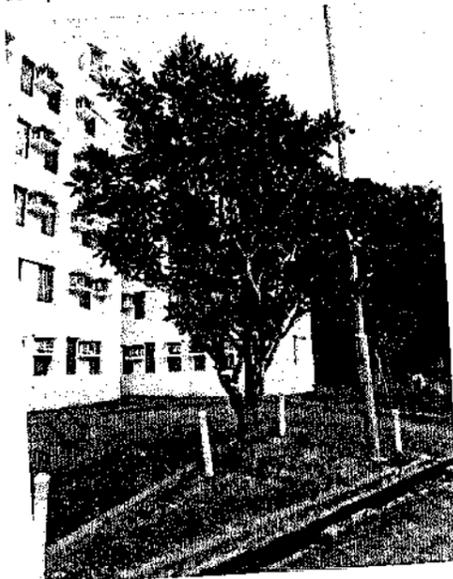
T60 | Transplant



T61 | Fell



T61 | Fell



T62 | Transplant



T62 | Transplant

TREE SURVEY PHOTOGRAPHS (INDIVIDUAL TREE)

DISCOVERY BAY OPTIMIZATION OF LAND USE - REFINEMENT OF AREA 10B



T63 | Transplant



T63 | Transplant



T77 | Retain



T77 | Retain



T110 | Fell



T110 | Fell

DISCOVERY BAY OPTIMIZATION OF LAND USE - REFINEMENT OF AREA 10B

TREE SURVEY PHOTOGRAPHS (INDIVIDUAL TREE)



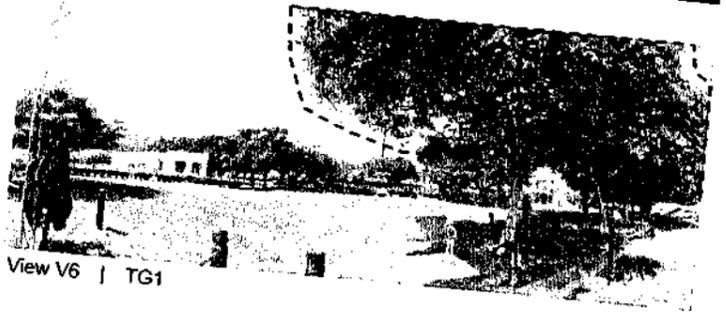
View V1 | TG1



View V3 | TG1



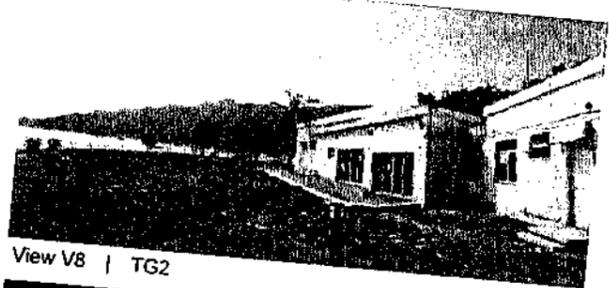
View V4 | TG1



View V6 | TG1



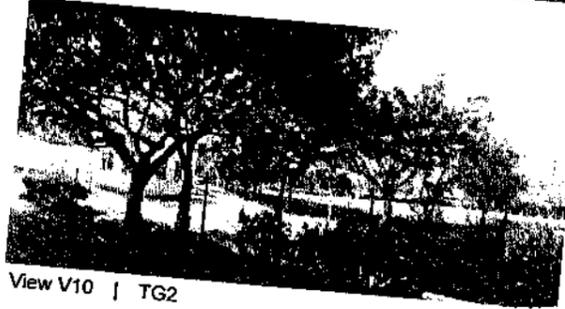
View V7 | TG1



View V8 | TG2



View V9 | TG2



View V10 | TG2

DISCOVERY BAY OPTIMIZATION OF LAND USE - REFINEMENT OF AREA 10B

TREE SURVEY PHOTOGRAPHS (TREE GROUP)



View V11 | TG2



View V12 | TG2



View V13 | TG2



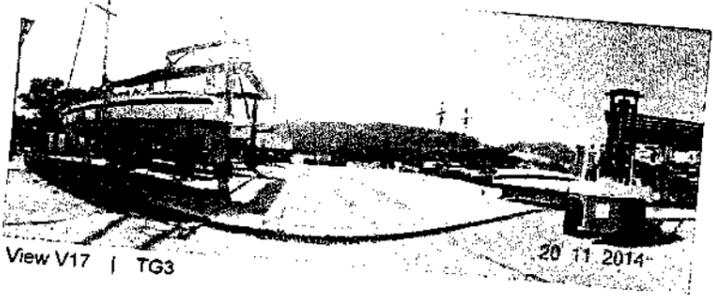
View V14 | TG3



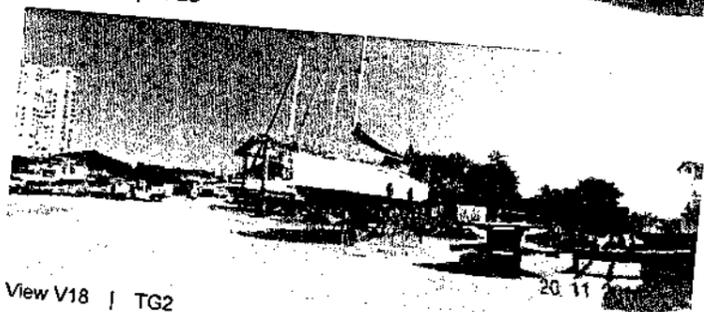
View V15 | TG3



View V16 | TG3



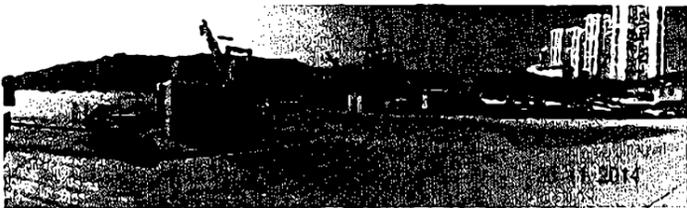
View V17 | TG3



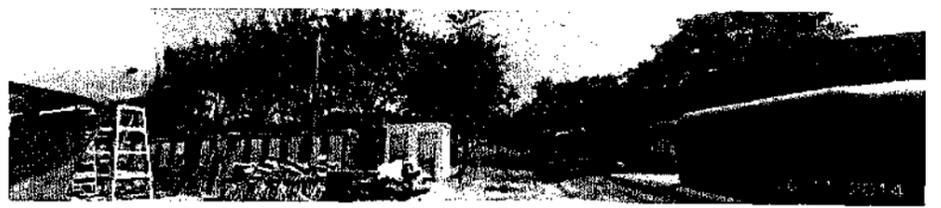
View V18 | TG2

DISCOVERY BAY OPTIMIZATION OF LAND USE - REFINEMENT OF AREA 10B

TREE SURVEY PHOTOGRAPHS (TREE GROUP)



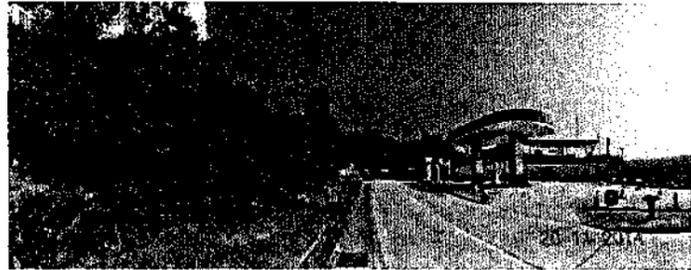
View V19



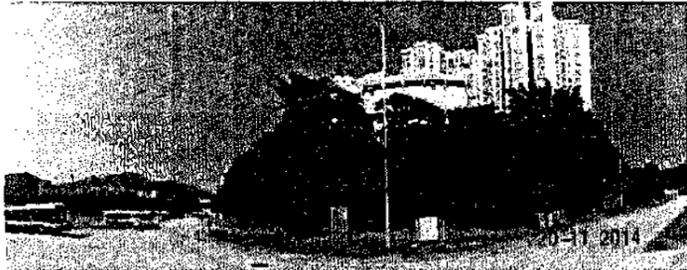
View V20 | TG2



View V21 | TG3



View V22 | TG3



View V23 | TG5



View V24



View V25 | TG5



View V26

DISCOVERY BAY OPTIMIZATION OF LAND USE – REFINEMENT OF AREA 10B

TREE SURVEY PHOTOGRAPHS (TREE GROUP)



View V27



View V28



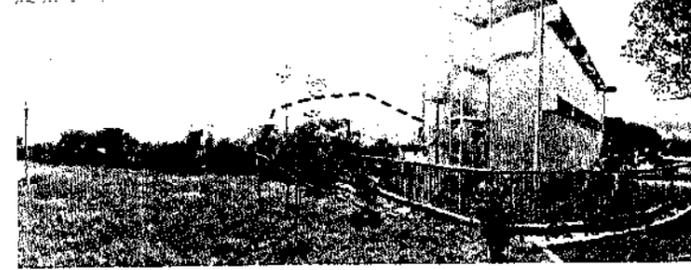
View V29



View V30



View V31 | TG5



View V32 | TG5



View V33 | TG5



View V34 | TG8

DISCOVERY BAY OPTIMIZATION OF LAND USE – REFINEMENT OF AREA 10B

TREE SURVEY PHOTOGRAPHS (TREE GROUP)



View V35 | TG8



View V36



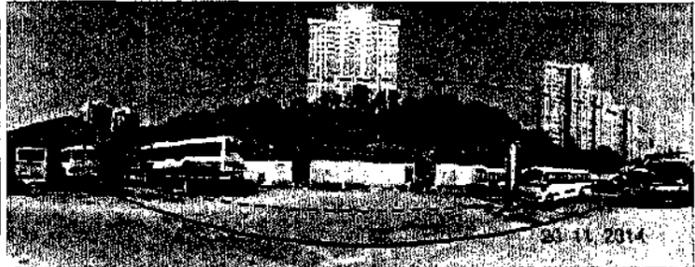
View V37 | TG8



View V38 | TG8



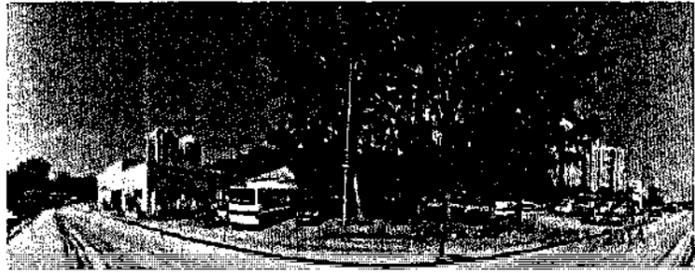
View V39 | TG6, TG7, TG8 and TG9



View V40 | TG8 and TG9



View V41



View V42

DISCOVERY BAY OPTIMIZATION OF LAND USE - REFINEMENT OF AREA 10B

TREE SURVEY PHOTOGRAPHS (TREE GROUP)



View V43



View V44 | TG10



View V45 | TG10



View V46 | TG8 and TG9



View V47 | TG10



View V48 | TG10



View V49 | TG7



View V50 | TG7

DISCOVERY BAY OPTIMIZATION OF LAND USE - REFINEMENT OF AREA 10B

TREE SURVEY PHOTOGRAPHS (TREE GROUP)



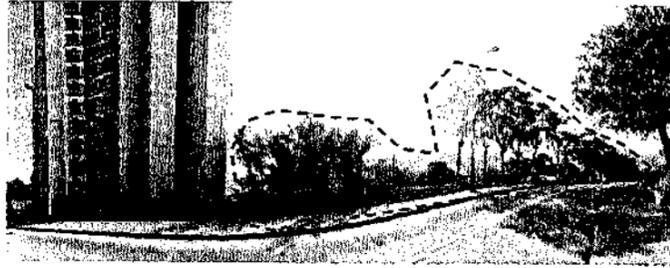
View V51 | TG6 and TG7



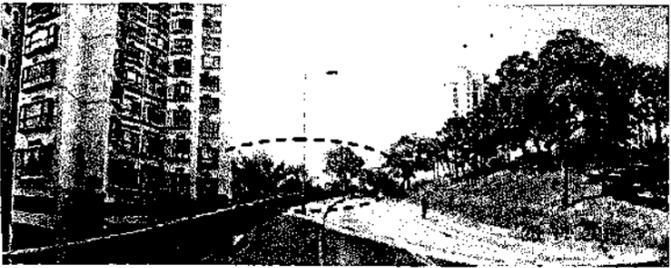
View V52 | TG6



View V53 | TG6



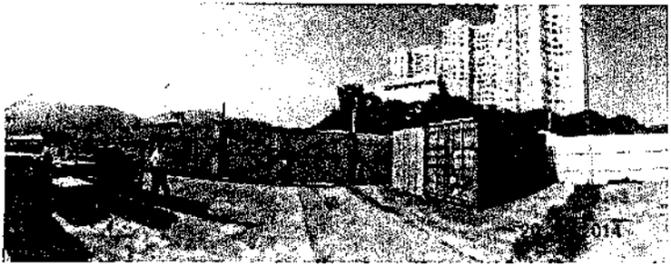
View V54 | TG6



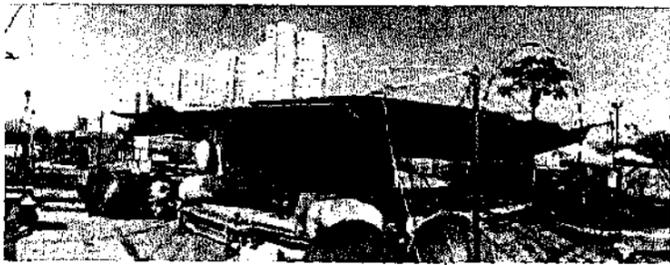
View V55 | TG6



View V56



View V56A



View V57 | TG4

DISCOVERY BAY OPTIMIZATION OF LAND USE – REFINEMENT OF AREA 10B

TREE SURVEY PHOTOGRAPHS (TREE GROUP)



View V58 | TG2



View V59 | TG2



View V60 | TG2



View V61 | TG2



View V62 | TG2



View V63 | TG2



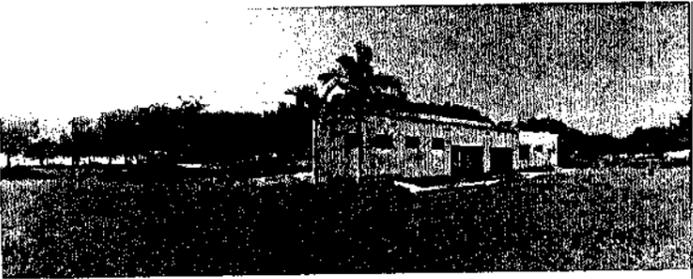
View V64 | TG2



View V65 | TG2

DISCOVERY BAY OPTIMIZATION OF LAND USE – REFINEMENT OF AREA 10B

TREE SURVEY PHOTOGRAPHS (TREE GROUP)



View V66 | TG2



View V67 | TG2



View V68 | TG2

DISCOVERY BAY OPTIMIZATION OF LAND USE – REFINEMENT OF AREA 10B

TREE SURVEY PHOTOGRAPHS (TREE GROUP)



Appendix E
Visual Impact Assessment

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1 INTRODUCTION

This Visual Impact Assessment (VIA) report has been prepared to support the **Section 12A Application for Optimisation of Land Use in Area 10b Discovery Bay, Lantau Island**. The Town Planning Board Guidelines TPB PG-No.41 – Guidelines on Submissions of Visual Impact Assessment for Planning Applications to the Town Planning Board have been used as a basis for the preparation of this report. In addition, reference has been made to the criteria for evaluation of visual impacts as laid out in Annex 10 of the Environmental Impact Assessment Ordinance (EIAO) Technical Memorandum.

This VIA has been prepared to identify the visual impact of the Proposed Development on:

- The visual amenity of the landscape around the Proposed Development;
- Persons in public places around the Proposed Development known as 'Visually Sensitive Receivers' (VSRs).

The report provides a description of the visual assessment methodology, a description of the scope of the Proposed Development and the key visual concerns, identifies baseline visual conditions, a summary of potential visual impacts and an assessment of those visual impacts. Additionally, visual mitigation measures are proposed and residual visual impacts are identified and assessed.

2 METHODOLOGY FOR THE APPRAISAL OF VISUAL IMPACT

2.1 Introduction

Appraisal of visual impacts is not an objective science but is based upon a structured and reasoned evaluation of predicted impacts, informed by professional judgement and experience. The methodology adopted for this VIA consists of:

1. Identification of Baseline Conditions (Assessment Area/ Zone of Visual Influence (ZVI)), Visual Elements and Resources and Viewing Points / Public VSRs);
2. Identification of Potential Sources of Impact;
3. Appraisal of Significance of Visual Impacts;
4. Mitigation Measures;
5. Conclusion/Evaluation of Overall Visual Impact.

These stages are described in more detail below.

2.2 Identification of Baseline Visual Conditions

During the identification of baseline visual conditions, the following elements are defined:

- Existing Site Conditions and ZVI of the proposed Project;
- Visual Elements and Resources; and
- Viewing Points / Public VSR's.

The identification of these conditions is the product of both desk-top research and field survey.

Zone of Visual Influence

In order to identify clearly the visual impacts of a Proposed Development, it is necessary to establish the existing baseline visual conditions of the surrounding environment. For these purposes, the project Study Area is defined with reference to the project's *Zone of Visual Influence (ZVI)*. The ZVI is that area surrounding the Proposed

Development from which any part of it can be clearly seen. Definition of the ZVI takes account of significant landforms and building groups. The ZVI forms the assessment area for the purposes of VIA.

Visual Elements and Resources

Visual Elements and Resources are the component features of a landscape or townscape which shape its appearance and visual character to those who see it. Key visual elements and resources may include major physical structures, visual attractors (e.g. water bodies, natural coastline, ridgeline, mountain backdrop, woodland, streams, etc.) and/or visual eyesores or detractors (e.g. pylons, sewage treatment plants, refuse collection points, ventilation shaft buildings, quarries, etc.) that currently exist or are known to be planned within the assessment area.

Different visual elements and resources may enhance, degrade or neutralize the overall visual impact of the Proposed Development being assessed. Victoria Harbour and its ridgelines for example are recognized as particularly important Visual Elements in the Hong Kong context.

Different aspects of visual elements and resources give the landscape its visual character, including their scale (e.g. buildings, topographic features, etc), variety of visual texture, pattern, form and colour. These features affect the visual character of a landscape and the type of development that can be accommodated within it without significantly changing this visual character.

Where committed future major development falls within the Assessment Area, its visual elements and resources are also considered, as far they are known.

Viewing Points / Public Visually Sensitive Receivers (VSR's)

Viewing Points - TPB PG-No.41 notes: "In the highly developed context of Hong Kong, it is not practical to protect private views without stifling development opportunity and balancing other relevant considerations. In the interest of the public, it is far more important to protect public views, particularly those easily accessible and popular to the public or tourists. VIA should primarily assess the impact on sensitive public viewers from the most affected viewing points. The viewing points could be kinetic or static. They include key pedestrian nodes, popular areas used by the public or tourists for outdoor activities, recreation, rest, sitting-out, leisure, walking, sight-seeing, and prominent travel routes where travellers' visual attention may be caught by the Proposed Development."

TPB PG-No.41 continues: "Local viewpoints should be determined with reference to the setting of the project and views of local significance".

Public VSR's - Those people who will experience views of the Application Site from publicly accessible viewpoints are known as public VSR's. They are identified through the definition of the Proposed Development's ZVI (i.e. the area within which views of the Proposed Development are perceived). For the purposes of this visual assessment, residential VSRs are considered to be private VSRs and therefore are not included.

Future Visual Receivers have been considered in the assessment, these being those who, whilst not able to see the Proposed Development from a given location at present, will be able to see it in the future as a result of development that is committed by Government.

Public VSRs are categorised on the basis of their character and their sensitivity to visual changes in the environment varies accordingly. The VSR categories are as follows:

- **Travellers:** Those people who would view the Proposed Development from vehicles or on foot engaged in travelling for daily non-recreational activities;
- **Recreational:** Those people who would view the Proposed Development whilst engaging in recreational activities.

The sensitivity of receivers to visual impacts is influenced by:

- 1) The activity in which they are engaged;
- 2) The duration and distance over which the Proposed Development would remain visible; and
- 3) The public perception of value attached to the views being assessed.

Receivers are categorised as being of High, Moderate or Low sensitivity to visual impacts:

- a) For those who view the Proposed Development whilst engaging in outdoor leisure pursuits, visual sensitivity varies depending on the type of recreational activity. Those taking a stroll in a park or hiking for example, would be classified as a High sensitivity group as their focus is on the surrounding visual amenity, compared to say football players who would have a Low sensitivity rating as their focus is within their field of play.
- b) For those people who view the Proposed Development from public thoroughfares, the degree of visual intrusion experienced depends on the speed of travel and whether views are continuous or only occasional. Generally, the slower the speed of travel and the more continuous the viewing experience, then the greater the degree of sensitivity. Generally, those travelling by car or by train are classified as a Medium sensitivity group.

2.3 Identification of Source of Visual Impacts

The key sources of visual impact of the Proposed Development are identified. These will generally include the completed buildings, associated structures and infrastructure works, such as highways, pumping stations, and electricity substations etc, used to service the Proposed Development. For the purposes of this VIA, sources of impact during the construction and operational stages of the Proposed Development are considered. It should be noted that Sources of Impact may be Positive or Negative.

2.4 Mitigation Proposals

Mitigation proposals to reduce the significance of visual impacts from the various sources are proposed. Mitigation measures can be part of the basic project design (e.g. sensitive siting of buildings, on site or preservation of existing trees) or can be added to the basic project design (e.g. new tree planting to screen a development and chromatic treatment of building facades). The mitigation proposals identified in this report are broad in their nature and subject to the design of the project.

2.5 Appraisal of Significance of Visual Impact

Under TPB PG-No.41, the significance of visual impacts to **Public VSRs at Key Public Viewing Points** shall be assessed. The 'significance' of a visual impact is defined as a function of the *sensitivity* of a Receiver and the *magnitude of change* to the visual character experienced by that Receiver. The criteria used to determine the magnitude of change of visual character to a view are:

- a) scale of change to character of views;
- b) proximity of Proposed Development; and
- c) length of time for which the view is experienced.

Impacts assessed are based upon the completed project. Impacts are also assessed on the assumption that mitigation measures are in place (and in the case of planting, that it is fully mature).

Impact significance is rated qualitatively as *Substantial*, *Moderate*, *Slight* or *Negligible*. *Negligible* impacts are deemed to make no significant difference to the character of views, even though the Application Site and development may be physically visible. Impacts are negative unless expressly stated as positive. **Table 1** below shows the matrix used to assess visual impacts (as provided in Annex 10 of the EIAO Technical Memorandum)

Table 1 - Matrix for Appraisal of Significance of Visual Impact

		SENSITIVITY OF VISUALLY SENSITIVE RECEIVER (VSR)		
		Low	Medium	High
MAGNITUDE OF CHANGE	Large	Moderate	Moderate/ Substantial	Substantial
	Intermediate	Slight/Moderate	Moderate	Moderate/Substantial
	Small	Insubstantial/Slight	Slight / Moderate	Moderate
	Negligible	Insubstantial	Insubstantial	Insubstantial

Note: All impacts are deemed to be negative unless expressly stated to be positive.

2.6 Conclusions – Evaluation of Overall Visual Impact

The report concludes with a summary discussion of the key visual impacts. The Conclusion provides a brief analysis of results and highlights key issues relating to visual impact. Finally, a single summary assessment of the impacts is made based on the following thresholds stated in TPB PG-No.41:

- **Enhanced** – if the Proposed Development in overall terms will improve the visual quality and complement the visual character of its setting from most of the identified key public viewing points;
- **Partly enhanced/partly adverse** – if the Proposed Development will exhibit enhanced visual effects to some of the identified key public viewing points and at the same time, with or without mitigation measures, exhibit adverse visual effects to some other key public viewing points;
- **Negligible** – if the Proposed Development will, with or without mitigation measures, in overall terms have insignificant visual effects to most of the identified key public viewing points, or the visual effects would be screened or filtered by other distracting visual elements in the assessment area;
- **Slightly adverse** – if the Proposed Development will, with or without mitigation measures, result in overall terms some negative visual effects to most of the identified key public viewing points;
- **Moderately adverse** – if the Proposed Development will, with or without mitigation measures, result in overall terms negative visual effects to most of the key identified key public viewing points; and
- **Significantly adverse** – if the Proposed Development will in overall terms cause serious and detrimental visual effects to most of the identified key public viewing points even with mitigation measures.

3 IDENTIFICATION OF BASELINE VISUAL CONDITIONS

3.1 Visual Context of Application Site

The Proposed Development Site at Area 10b of Discovery Bay on Lantau is 62,875 sq.m and lies mostly on flat reclaimed land at an elevation of approximately 5mPD overlooking Nim Shue Wan to the south. The northern edge of the site rises on tree covered man-made slopes to a natural headland which is occupied by the residential developments of Peninsula Village, Coastline Villa, Twilight Court, Capevale Drive (Jovial, Haven and Verdant Courts). A large marina with associated club house facilities lies to the north-east of the site. To the north-west, the site is overlooked by the residential villages of La Serene and La Vista which are sited on an elevated natural ridge and the village of La Costa lies directly north. The small inhabited outlying island of Peng Chau lies over a kilometer to the east. The site currently accommodates a variety of community service facilities including a refuse collection point, a petrol filling station, a golf cart service centre, bus parking and repair workshops, a small shipyard, service staff quarters, a sewage pumping station and a decommissioned sewage treatment plant. The south eastern end of the site beyond the shipyard is a derelict former club house area surrounded by mature trees. The southern edge of the site consists of a mixture rock armoured reclamation edge and vertical seawall which serves as an embarking point for regular inter-island kaito services, refuelling point for Discovery Bay ferries, a temporary mooring point for larger service vessels and the sailing ship "Bounty". Due to

the functional nature of the site and the mix and type of land uses, the general appearance contrasts negatively with the neighbouring well kempt, heavily landscaped residential areas to the north and the scenic Nim Shue Wan to the south. The site is characterised by large open areas of concrete, low rise structures for supporting services, and parked vehicles and the visual quality can be described as low.

Visual Attractors

- **Sea and Coast**

The site has a very scenic outlook overlooking Nim Shue Wan to the south with its sandy beaches and rocky headlands and varied moored recreational craft. The bay waters connect to the broader coastal waters of Lantau with its natural rocky coastline and Peng Chau. Settlements on this coast are limited to small isolated village clusters which due to their low height (maximum 2 storeys) and simple construction blend into the landscape backdrop.

- **Topography**

The site is overlooked to the west by the steeply rising vegetated hills of Lantau which provide a scenic backdrop and to the north by elevated headland terrain. The land to the east of the site is flat reclamation and to the south is the open bay of Nim Shue Wan.

- **Woodland and Amenity Planting**

In contrast to the surrounding landscape, the site itself is generally devoid of vegetation except for the tree covered slopes along the northern edge and the south eastern tip which forms the former club house and is surrounded by mature tree planting. The natural slopes behind Nim Shue Wan are densely vegetated with semi-natural woodland. The residential areas on the headland to the north and the marina club to the east are heavily landscaped and provide an attractive green outlook.

- **Rural Fringe/Village Residential Character**

Discovery Bay is an attractive self-contained residential resort style development consisting of a series of villages of varying architectural styles mixing low, medium and high-rise blocks. The residential development generally adopts a very low density with a high proportion of landscaped open space. This development style provides a backdrop to the north-west, north and north-east of the development site with a high level of visual amenity.

- **The Bounty**

The Bounty is a replica of an historic sailing ship owned by HKR which is moored at the quayside near the shipyard. It is an attractive feature and its tall masts make it a local landmark.

Visual Detractors

- **Sewage Treatment Plant**

A sewage pumping station lies at the western entrance to the site and consists of drab, functional concrete buildings with no architectural merit.

- **Golf Cart Service Centre**

This consists of a parking area for golf carts in various states of repair and some temporary workshops. The facility has a temporary feel and no positive visual merits.

- **Refuse Collection Point**

The refuse collection point consists of a series of sheds and outdoor storage areas occupied by refuse skips. Refuse is collected, sorted and shipped out by barge from the quayside. Whilst the operation is reasonably tidy, the piles of refuse detract visually from the area.

- **Bus Maintenance Depot**

The local bus fleet is parked and maintained in large low sheds and on the open paved areas of the site. This assemblage of industrial style sheds and large, brightly coloured vehicles detracts from the scenic waterside context of the site.

- **Staff Quarters**

Quarters for staff employed in community services are provided in the form of a basic residential block sited near the centre and back of the site. The building has no particularly architectural merit and generally adds to the unattractive service character of the site.

- **Ship Yard**

The ship yard lies towards the south eastern end of the site. It houses workshops, boat racks and cranes and various craft undergoing repair and includes a large open concrete paved yard. Whilst its activities are appropriate to the waterside context and provide a measure of visual interest, the general utilitarian character of the yard contrasts with the surrounding well kempt housing and marina areas.

- **Petrol Filling Station**

The petrol filling station is sited just before the entrance to the Marina Club and is another unsightly service provision that does not integrate well visually with the adjacent residential land-uses.

3.2 Description of Development Proposal

The proposed development layout is illustrated on Figure B.6. The Proposed Development consists of a podium at the back of the site parallel with the slopes supporting one 18-storey residential building at the north western end and a row of 4-6 storey residential buildings. At the south eastern end of the site is another 18-storey residential building and two residential buildings with building heights of 6 to 12 domestic storeys. The waterfront is lined with 3-4 storey storey houses with piers and informal recreational spaces. A petrol station is located near the north western entrance to the site and two piers are provided along the waterfront. The development includes a new access road branching off Discovery Bay Road forming a spine running the length of the site serving all the property and the existing marina club. A second access from Discovery Bay Road will service the podium level. A communal open space is proposed at the south eastern end of the site and there are two landscape nodes along the access road that open onto the waterfront, one of which will include a kaiti pier, the other which will serve as a mooring point for the Bounty. The existing trees on the slopes along the northern boundary will largely be retained as a green buffer. The existing service function will be relocated beneath the podium. The sewage pumping station at the entrance will be retained and a new a petrol station will be provided on the opposite side of the access road. A full development schedule is provided in Table 2 below:

Table 2 - Development Schedule

DEVELOPMENT SCHEDULE	
Application Site Area (m²)	62,875 m ²
Proposed Domestic Plot Ratio	1.07
No. of Tower Blocks	4 Nos.
No. of houses	68 Nos.
No. of Storeys	4 to 18 Nos.
No. of Units	1125 Nos.

3.3 Zone of Visual Influence (ZVI)

The study area for the visual impact assessment is determined by the potential extent of visibility of the Proposed Development. The primary zone of visual influence (ZVI) is that area from which any part of the Proposed Development can be seen. This 'Visual Envelope' or 'ZVI' has been determined by means of site investigations

together with line-of-sight studies using survey maps. Potential sources of visual impact that would be generated by the project have been identified by desk-top studies and by discussions with the project proponent (refer to Figure B.1).

4 Committed Development

Committed developments identified within the ZVI include:

- Up-market low rise detached residential units along the eastern edge of the Golf Course. The site formation for this residential development is complete. The construction for the housing has already commenced and will be completed in 2016.
- Housing development in lots along Peng Chau waterfront. Construction works are currently underway.
- New hotel construction at Disneyland Theme Park. Site formation works are currently underway.

As the developments above are private residential/hotel developments rather than public facilities providing new public viewpoints, they are not assessed further in this study although their future presence is taken into account in the assessment of visual compatibility of the Proposed Development within the surrounding landscape context.

4.5 Potential Public Visually Sensitive Receivers (VSRs)

As per the requirements of TPB PG-NO.41, the selected VSRs are those members of the public who are most affected by the Proposed Development.

- **VSR REC1 (VP1)** : Residents and Visitors at Tai Pak Wan Public Beach **Figure B.2:** this VSR Group is large and will have distant partial views of the towers of the Proposed Development to the south east.
- **VSR REC2 (VP2)** : Hikers at Lo Fu Tau Pergola/Lookout **Figure B.2:** this VSR Group will have distant, elevated views of the towers of the Proposed Development site to the south east.
- **VSR REC3(VP3)** : Hikers on Lau Fa Tung Hiking Trail **Figure B.2:** this VSR Group will have distant, elevated views of the site to the south east.
- **VSR REC4 (VP4)** : Hikers and users of Nim Shue Wan Pier **Figure B.3:** this VSR Group will have full low level views of the Proposed Development site to the north east.
- **VSR REC5 (VP5)** : Hikers at Cheung Sha Lan **Figure B.3:** this VSR Group will have partial low level views across Nim Shue Wan of the Proposed Development to the north east.
- **VSR REC6 (VP6)** : Hikers at Tai Shui Hang **Figure B.3:** this VSR Group will have distant elevated views of the Proposed Development to the north.
- **VSR REC7 (VP7)** : Users of Peng Chau Promenade **Figure B.4:** this VSR Group will have distant views of the Proposed Development to the north west.
- **VSR REC8 (VP8)** : Hikers on Peng Yu Path, Peng Chau **Figure B.4:** this VSR Group will have distant views of the Proposed Development to the north west.
- **VSR T1 (VP9)** : Passengers in Ferries in Tai Pak Wan **Figure B.5:** this VSR Group will have distant low level views of the Proposed Development to the south west.
- **VSR REC9 (VP10)** : Visitors to the Disneyland Promenade **Figure B.5:** this VSR Group will have distant low level views of the Proposed Development to the south west.

POTENTIAL SOURCE OF VISUAL IMPACTS

This section describes the sources of visual impacts resulting from the Proposed Development during construction and during operation.

Construction Phase

Potential sources of visual impacts during the construction phase will include:

- Loss of existing trees on the development site;
- Earth moving and site formation operations;
- Construction of 4 residential towers of 6 to 18 storeys, a podium with 12 nos. medium rise houses, 56 nos. semi-detached houses along the waterfront, a petrol filling station including associated construction equipment and plant such as scaffolding, cranes and hoardings; and
- Temporary construction traffic within and on roads around the Application Site.

Operational Phase

Potential sources of visual impacts during the operation phase include:

- Permanent built form of the new development.

PROPOSED MITIGATION MEASURES

Visual mitigation measures seek to minimise potential impacts by helping to integrate the new development into the landscape context of the surrounding area. Visual mitigation features incorporated within the proposed design include spacing of the high rise towers to enhance visual permeability avoid a visual "wall" effect thereby reducing visual obstruction to existing VSRs. The heights of the three towers at the south eastern end are tapered from 18 to 6 storeys towards the waterfront. The house unit development also adopts a stepped profile with the low housing types (4 storeys) along the waterfront and the medium rise housing sited on the podium behind overlooking them. This creates a descending visual profile from the elevated peninsula towards the waterfront. The heights of the housing on the podium have also been kept low to avoid obstruction of views from the existing residential areas to the north. Sensitive siting and design of the towers including measures to articulate their facades and appropriate choice of materials and colour scheme can reduce the visual impact by blending their elevations with the colours and tones of the surrounding landscape. Tree and shrub planting at ground level will create a residential character similar in style to the surrounding residential development and will in particular will integrate the edges of the site with the adjacent landscape. Visual mitigation measures are illustrated on **Figure B6 – Visual Mitigation Measures**).

Construction Stage Visual Mitigation Measures

- Retention of existing tree buffers;
- Screen hoardings;
- Advance screen tree planting.

Operational Stage Visual Mitigation Measures

The Proposed Development will integrate the following visual impact mitigation measures into the architectural and landscape designs:

- Spacing of towers to enhance the degree of visual permeability to avoid a 'wall' effect;
- Sensitive architectural and chromatic treatments to buildings and engineered structures sympathetic to the landscape context;
- Tree and shrub planting along the Proposed Development boundaries to integrate the Application Site with the adjacent landscape and provide a degree of screening;
- Tree and shrub planting within the Proposed Development site in accordance with the Landscape Master Plan to enhance the general visual amenity and overall perception of the character of the development.

6 APPRAISAL OF VISUAL IMPACTS

6.1 Effect of Visual Change on Visual Composition

As described in Section 3 above, the surrounding landscape context has considerable natural and man-made visual amenity but the existing site service/utility land uses with their ad hoc layout, industrial character and utilitarian finishes combine to create an area of contrasting low visual quality. The construction of the Proposed Development will transform the site into a coherently planned residential neighbourhood which will be visually compatible with the surrounding residential areas.

The elements of most potential visual impact are the high-rise towers as they will provide new vertical elements to the local landscape context. The tallest tower (18 storeys) has been sited at the "inland" end of the site, ie. at the landward end of the peninsular and will create a visible new element in the landscape although it will be similar in height to the existing Twilight Court and Costa and Onda Courts to the north. Its visual prominence will therefore be less than if it was the only tower in the locality. The other 18 storey tower is sited at the south eastern end of the site back from the waterfront edge. This will appear as an extension of the three towers at Capevale Drive (Jovial, Haven and Verdant Courts). The two additional tower blocks step down in height to 12 and 6 storeys respectively creating a transition to the height of the lowrise 4-storey waterfront housing.

6.2 Impact on Visually Sensitive Receivers

The visual impacts of the Proposed Development on the Key Public VSRs are summarised in Table 3 and are described briefly below. The locations of the Viewing Points are shown on Figure B.1. Photomontage views from the selected key public viewpoints are presented on Figures B.7 to B.11. Photomontage viewpoints were selected to illustrate a representative range of views from different viewing distances and directions.

Travelling Visually Sensitive Receivers

VSR T1 (VP9): Passengers in Ferries in Tai Pak Wan (Figure B.5)

Passengers in Ferries in Tai Pak Wan currently have no view of the existing site as it is screened by the peninsula forming the south side of Tai Pak Bay. However, following construction, the tops of the new towers will be just visible above the Coastline Villa and the peninsula skyline. The magnitude of change is assessed as *Small*. The VSRs are considered to have a *Low* sensitivity as their view is not static and will be experienced for a very short period. The resulting visual impact significance following mitigation will be *Slight*.

Recreational Visually Sensitive Receivers

VSR REC1 (VP1): Residents and Visitors at Tai Pak Wan Public Beach (Figure B.2)

Residents and Visitors using Tai Pak Beach currently have no existing view of the site as it is screened by the Discovery Bay Plaza buildings and the residences of La Costa. Following construction, the new 18 storey tower will be visible between the La Costa medium rise buildings and the high-rise Costa and Onda Courts. The magnitude of change is assessed as *Small* as existing views are open and panoramic and the Proposed Development will only constitute a minor change to the overall visual context and the new tower is an addition to an existing building group. The sensitivity of this VSR group is assessed as *High* as although it is assumed that their main focus of attention is the beach, the surrounding views are a contributing factor to the amenity of the beach setting. The resulting visual impact significance would be *Slight* following mitigation.

VSR REC2 (VP2): Hikers at Lo Fu Tau Pergola/Lookout (Figure B.2)

Hikers at the Lo Fu Tau Pergola/lookout currently experience elevated panoramic views over Discovery Bay and Tai Pak Bay and the sea and island landscape beyond. Views of the existing site are screened by the elevated ridge upon which La Vista and La Serene are situated. Following construction, the new towers will be visible above La Vista and La Serene. This VSR group is large in number as the lookout is a popular destination and is

considered to have a *High* sensitivity as it comprises people who are there specifically to experience the view. The magnitude of visual change is assessed as *Small* due to the distance from the viewing point, the open panoramic view offering alternative view points and closer features in the foreground and the fact that the new towers will be perceived as a relatively minor addition to an existing residential area. The resulting visual impact significance would be *Slight* following mitigation.

VSR REC3 (VP3): Hikers on Lau Fa Tung Hiking Trail (Figure B.2)

Hikers on the Lau Fa Tung hiking trail currently experience elevated panoramic views over Discovery Bay residential area and Tai Pak Bay and the sea and island landscape beyond. Due to the elevated angle of view, the existing site is visible from this point. Following construction, the new development will be visible as an extension of the residential villages on the peninsula. This VSR group is few in number and is considered to have a *High* sensitivity as it comprises people who are there specifically to experience the view. The magnitude of visual change is assessed as *Negligible* due to the open panoramic view offering alternative view points and closer features in the foreground and the fact that the new development will be perceived as a compatible extension to the existing residential area. The resulting visual impact significance would be *Insubstantial* following mitigation.

VSR REC4 (VP4): Hikers and Users of Nim Shue Wan Pier (Figure B.3 & Photomontage B7)

Hikers and users of Nim Shue Wan Pier currently experience full, open views across the bay towards the site. Following construction the full south western elevation of the development will be visible. The magnitude of change is assessed as *Large*. The development will obstruct the existing tree planting on the slopes of the peninsula and increase the built-up appearance of the waterfront. The high rise towers will introduce a degree of obstruction to the existing skyline. This walking trail is popular and heavily used and the sensitivity of this VSR Group is *High*. The resulting visual impact significance will be *Substantial*. A photomontage from this viewpoint illustrating the potential visual impact of the proposed development is provided in Figure B.7.

VSR REC5 (VP5): Hikers at Cheung Sha Lan (Figure B.3)

Hikers on the public footpath at Cheung Sha Lan currently experience views across the bay towards the site. The site is partially blocked by the rocky headland opposite Nim Shue Wan Village. Following construction the south-western elevation of the development will be visible and also the upper storeys of the new 18-storey tower block to the north above the headland. The magnitude of change is assessed as *Intermediate*. The tower blocks will introduce a degree of obstruction of the existing skyline although the stepped heights of the blocks from the north-west to the southeast will assist in integrating the buildings with the mountain ridgelines behind. This walking trail is popular and heavily used and the sensitivity of this VSR Group is *High*. The resulting visual impact significance will be *Moderate*.

VSR REC6 (VP6): Hikers at Tai Shul Hang: VP6 (Figure B.3 & Photomontage B.8)

Hikers on the public footpath at Tai Shul Hang currently experience elevated views across the bay towards the site. Following construction the south western elevation of the development will be fully visible. None of the towers breaks the ridgeline of the mountains behind and the stepped heights of the blocks from the north-west to the southeast will assist in integrating the buildings with the existing building profiles of the headland. The magnitude of change is therefore assessed as *Intermediate*. This walking trail is popular and heavily used and the sensitivity of this VSR Group is *High*. The resulting visual impact significance is assessed as *Moderate* following mitigation. A photomontage from this viewpoint illustrating the potential visual impact of the Proposed Development is provided in Figure B.8.

VSR REC7 (VP7): Users of Peng Chau Promenade: VP7 (Figure B.4 & Photomontage B.9)

This VSR Group have existing views north-west across the open expanse of sea towards the site. The existing buildings on the peninsula all lie beneath the ridgeline of the mountains beyond and do not form dominant visual elements. Following construction, the houses and towers at the south eastern end of the site will be visible and part of the 18 storey tower although this will be perceived as having a similar height to the Capevale Drive towers. The new visible buildings step down to the waterfront and will be visually with the existing towers of

Capevale Drive. The magnitude of visual change is assessed as *Small* due to the distance of view, partial visibility and degree of compatibility of the new forms with the existing building mass. The sensitivity of this VSR Group is *Medium* as it is a working waterfront as well as a public promenade. The resulting visual impact significance is assessed as *Slight* following mitigation. A photomontage from this viewpoint illustrating the potential visual impact of the Proposed Development is provided in Figure B.9.

VSR REC8 (VP8): Hikers on Peng Yu Path, Peng Chau: VP8 (Figure B4 & Photomontage B.10)

This VSR Group have existing views west across the open expanse of sea towards the site. The existing villages on the peninsula form a near continuous built mass, the height of which is well beneath the ridgeline of the mountains beyond. Following construction, the houses and towers at the south eastern end of the site will be visible above and behind the marina. The new buildings step down to the waterfront and are visually integrated with the existing towers of Capevale Drive and La Vista behind. The magnitude of impact is assessed as *Negligible* due to the distance of view and degree of compatibility of the new forms with the existing building mass. The sensitivity of this VSR Group is *High*. The resulting visual impact significance is assessed as *Insubstantial* following mitigation. A photomontage from this viewpoint illustrating the potential visual impact of the Proposed Development is provided in Figure B.10.

VSR REC9 (VP10): Visitors to the Disneyland Promenade (Figure B.11)

This VSR Group currently have distant views towards Discovery Bay to the south west. Peninsula Village cloaks the headland and the building heights step down to Coastline Villa and the marina. Following construction, only the upper storeys of the new towers at the south-western end of the development site will be visible above the line of Coastline Villa. The magnitude of visual change is assessed as *Negligible* due to the distance from the viewing point and the fact that the towers will form a barely perceptible addition to the existing building group. This VSR Group is many in number and has a *High* sensitivity as their primary focus on the waterfront is the panoramic sea view. The resulting visual impact significance is assessed as *Insubstantial* following mitigation. A photomontage from this viewpoint illustrating the potential visual impact of the Proposed Development is provided in Figure B.11.

Table 3 Summary of Visual Impact Assessment

Key Visually Sensitive Receivers (VSRs)	Degree of Visibility of Source(s) of Visual Impact (Full, Partial, Glimpse)	Approx. Distance Between VSR & Nearest Source(s) of Impact	Magnitude of Change (Large, Intermediate, Small, Negligible)	Receptor Sensitivity & Number (Low, Medium, High) (Very Few, Few, Many, Very Many)	Impact Significance during Operation Phase following Mitigation (Substantial, Moderate, Slight, Insubstantial, Enhanced)
VSR T1: Passengers in Ferries in Tai Pak Wan:	Partial	1000m	Small	Low/Many	Slight
VSR REC1: Residents and Visitors at Tai Pak Wan Public Beach	Partial	650m	Small	High/Many	Slight
VSR REC2: Hikers at Lo Fu Tau Pergola/Lookout	Partial	1700m	Small	High/Many	Slight
VSR REC3: Hikers on Lau Fa Tung Hiking Trail	Partial	2500m	Negligible	High/Few	Insubstantial
VSR REC4: Hikers and Users of Nim Shue Wan Pier	Full	200m	Large	High/Many	Substantial
VSR REC5: Hikers at Cheung Sha Lan	Partial	530m	Intermediate	High/Many	Moderate
VSR REC6: Hikers at Tai Shui Hang	Full	1100m	Intermediate	High/Many	Moderate
VSR REC7: Users of Peng Chau Promenade	Partial	1600m	Small	High/Many	Slight

VISUAL IMPACT ASSESSMENT

Key Visually Sensitive Receivers (VSRs)	Degree of Visibility of Source(s) of Visual Impact (Full, Partial, Glimpse)	Approx. Distance Between VSR & Nearest Source(s) of Impact	Magnitude of Change (Large, Intermediate, Small, Negligible)	Receptor Sensitivity & Number (Low, Medium, High) (Very Few, Few, Many, Very Many)	Impact Significance during Operation Phase following Mitigation (Substantial, Moderate, Slight, Insubstantial, Enhanced)
VSR REC8: Hikers on Peng Yu Path, Peng Chau	Partial	1650m	Negligible	High/Few	Insubstantial
VSR REC9: Visitors to the Disneyland promenade	Partial	3000m	Negligible	High/Many	Insubstantial

Types of Key Visually Sensitive Receivers (VSRs): T - Transport Related VSRs; REC- Recreational VSRs
 Note: All impacts are negative unless otherwise stated.

7 CONCLUSION

7.1 Appraisal of Visual Composition

It is considered that the residential character of the Proposed Development is compatible with the surrounding existing residential character of the neighbourhood and the general visual context (more so than the existing land-use of the area which lowers the visual quality of the area). The size and massing of the proposed residential towers is similar to the existing residential towers of Peninsula Village and their siting and stepped profile towards the coast reduces the degree of visual impact and minimises the visual intrusion into the existing landscape composition. The height of the proposed towers is lower than the existing hill ranges behind and from most viewpoints the towers do not break the ridgelines behind.

7.2 Appraisal of Visual Obstruction

The degree of visual obstruction created by the proposed towers is generally low due to the fact that the towers are located within the context of Peninsula Village which has existing towers of similar scale. From many viewpoints, the proposed towers will be partially screened by the existing towers and or buildings and generally only the upper floors provide a degree of additional obstruction.

7.3 Effect on Public Viewers

One of the ten public VSR groups identified (VSR RECA – Hikers and Users of Nim Shue Wan Pier) is assessed as experiencing *Substantial* visual impact following construction and implementation of visual mitigation measures. However, whilst some of these impacts are negative (such as visual obstruction caused by the tower blocks), the general upgrading of the site from one of low visual quality into a logical extension of the existing residential areas will generate positive visual gains. The degree to which visual change is regarded as positive is largely a function of proximity as at greater viewing distances, the overall massing of the development becomes more important than the perceived character. As the site is largely enclosed within Nim Shue Wan Bay, hikers on the coastal trails will experience *Moderate* visual impacts due to their close proximity. Users of Tai Pak Wan beach, hikers at Lo Fu Tau Pergola and users of Peng Chau promenade will experience *Slight* visual impacts due to the new 18 storey tower that will be visible above the Plaza skyline. All other VSR Groups will experience *Insubstantial* visual impacts.

7.4 Effect on Visual Resources

The Proposed Development lies on the edge of the Peninsula Village residential area and close to existing low rise and residential towers of similar character. The effects of the development on the positive visual resources identified in Section 3.1 above are as follows:

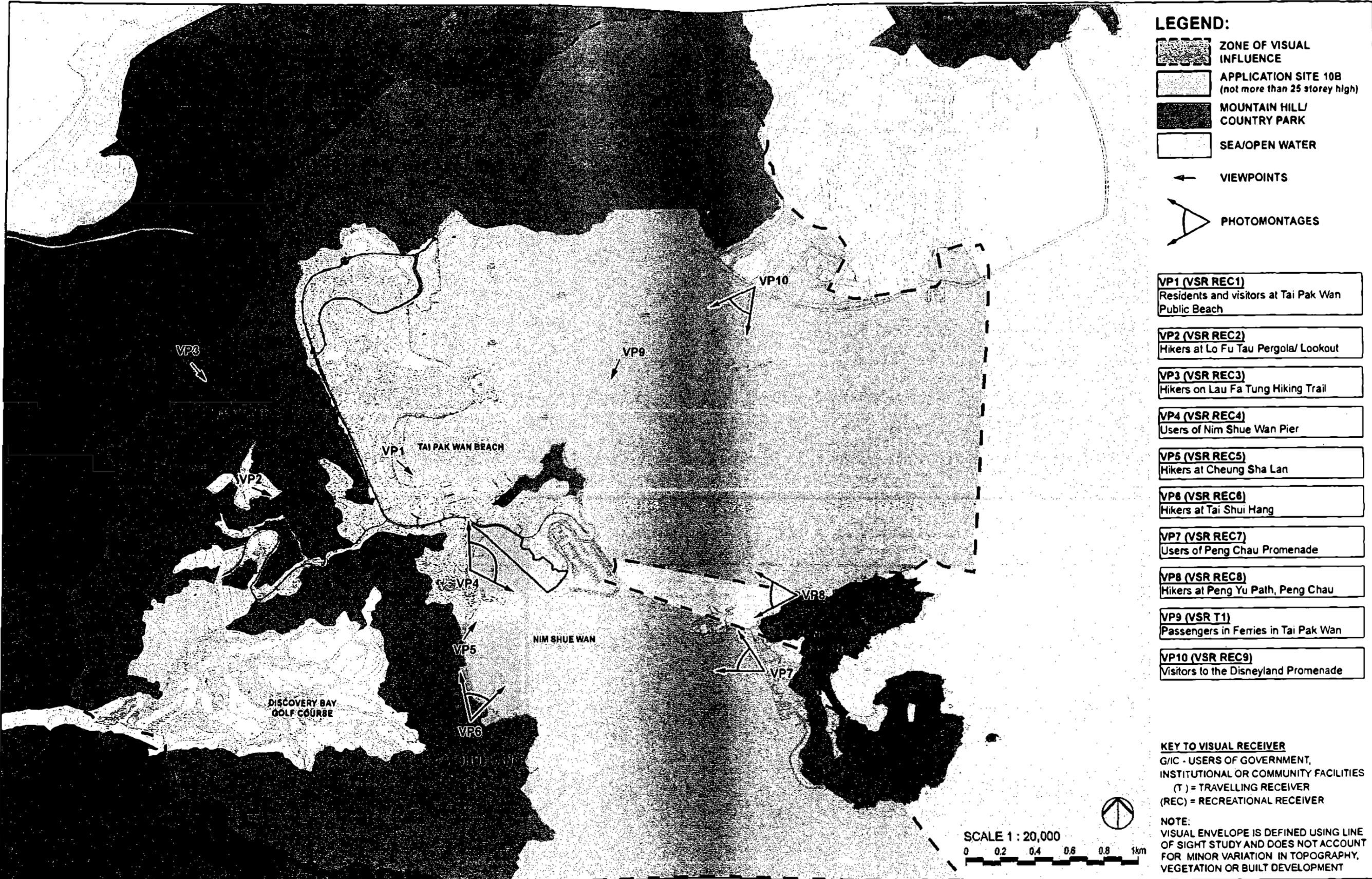
- **Sea and Coast:** the only coastline affected will be the site waterfront resulting in positive visual benefits due to a rationalisation of the reclamation edge with purpose built promenade and staging areas for kaitos and mooring.
- **Topography:** little or no slope works will be undertaken in order to construct the new development as it will all be on existing reclaimed land. The height of the tower blocks is lower than the surrounding ridgelines, thus no significant effects on the existing topography are anticipated.
- **Woodland and amenity planting:** the existing trees on the slopes at the back of the site will largely be retained as a green buffer but most of the existing vegetation on the flat portion of the site will be removed in order to construct the development. However, new tree and shrub amenity planting will offset the lost vegetation and contribute to the visual mitigation of the proposed development.
- **Rural Fringe Residential Character:** the Proposed Development will be highly compatible with the existing residential character.

- **The Bounty:** a mooring berth will be provided for the Bounty in the Proposed Development so the visual amenity that it brings to the locality will be preserved.

The visual detractors identified on the existing site will be removed by the Proposed Development which will relocate them either beneath the proposed podium or off-site altogether.

7.5 Evaluation of Overall Visual Impact

It is considered that the overall visual impact of the Proposed Development would be **Partly Enhanced/Partly Adverse** in terms of the criteria of TPB PG-No. 41, that is, it will, with or without mitigation measures, exhibit enhanced visual effects to some of the identified key public viewing points and at the same time, with or without mitigation measures, exhibit adverse visual effects to some other key public viewing points. Generally, closer VSRs will perceive the Proposed Development as an enhancement of the existing site by replacing an existing scene of low visual quality whereas VSRs from greater distances will perceive the development as partly adverse due to the increased density of development and slight increase in visual obstruction caused by the towers. As the Proposed Development is highly compatible with the existing residential character of Peninsula Village and the existing land-use is not, it is considered that it would generally represent a positive visual impact.

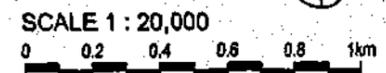


- LEGEND:**
- ZONE OF VISUAL INFLUENCE
 - APPLICATION SITE 10B (not more than 25 storey high)
 - MOUNTAIN HILL/ COUNTRY PARK
 - SEA/OPEN WATER
 - VIEWPOINTS
 - PHOTOMONTAGES

- VP1 (VSR REC1)**
Residents and visitors at Tai Pak Wan Public Beach
- VP2 (VSR REC2)**
Hikers at Lo Fu Tau Pergola/ Lookout
- VP3 (VSR REC3)**
Hikers on Lau Fa Tung Hiking Trail
- VP4 (VSR REC4)**
Users of Nim Shue Wan Pier
- VP5 (VSR REC5)**
Hikers at Cheung Sha Lan
- VP6 (VSR REC6)**
Hikers at Tai Shui Hang
- VP7 (VSR REC7)**
Users of Peng Chau Promenade
- VP8 (VSR REC8)**
Hikers at Peng Yu Path, Peng Chau
- VP9 (VSR T1)**
Passengers in Ferries in Tai Pak Wan
- VP10 (VSR REC9)**
Visitors to the Disneyland Promenade

KEY TO VISUAL RECEIVER
 G/IC - USERS OF GOVERNMENT, INSTITUTIONAL OR COMMUNITY FACILITIES
 (T) = TRAVELLING RECEIVER
 (REC) = RECREATIONAL RECEIVER

NOTE:
 VISUAL ENVELOPE IS DEFINED USING LINE OF SIGHT STUDY AND DOES NOT ACCOUNT FOR MINOR VARIATION IN TOPOGRAPHY, VEGETATION OR BUILT DEVELOPMENT

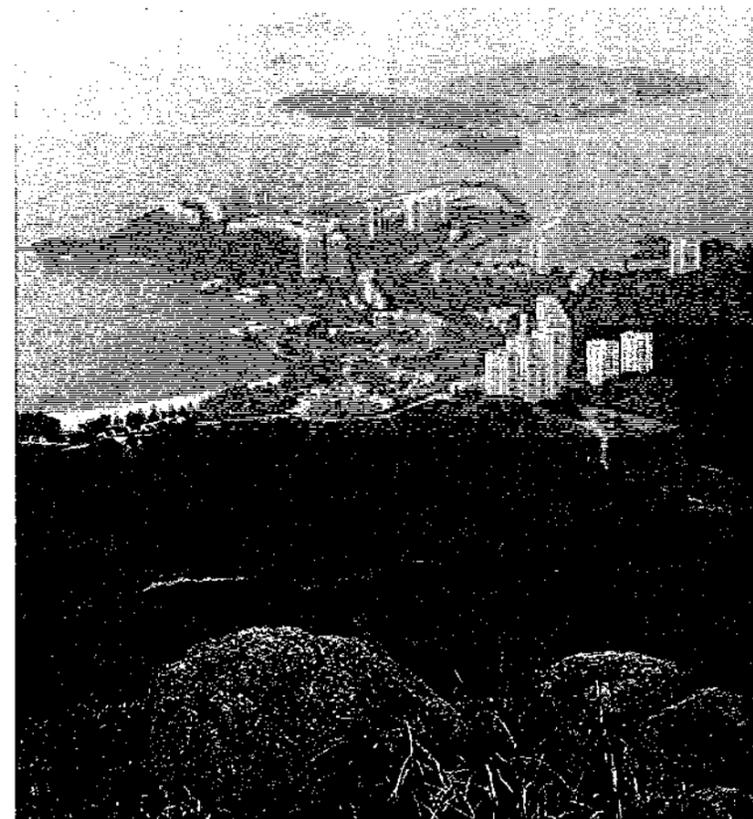




VP1 (VSR REC1): View from Tai Pak Wan Public Beach



VP2 (VSR REC2): View from Lo Fu Tau Pergola/Lookout



VP3 (VSR REC3): View from Lau Fa Summit/Tung Hiking Trail

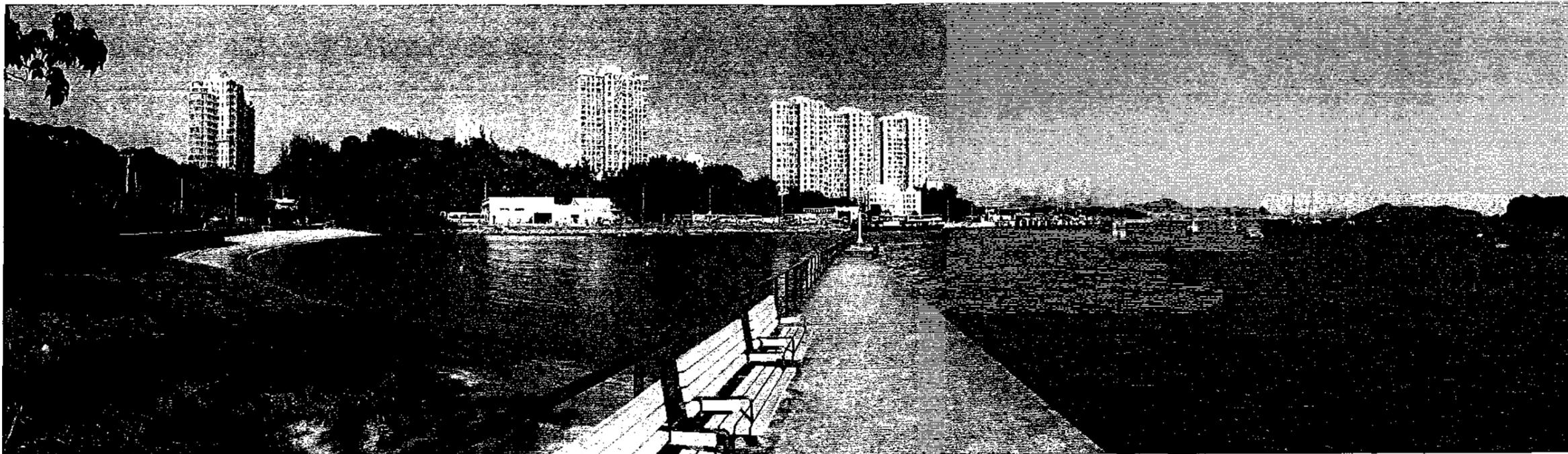


TITLE: **VIEWPOINTS VP1, VP2, VP3**

PROJECT: **OPTIMISATION OF LAND USE IN DISCOVERY BAY, SITE 10(b)**

DEC 2015

FIGURE : **B.2**



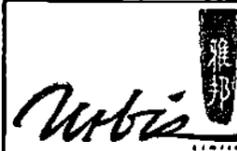
VP4 (VSR REC4): View from Nim Shue Wan Pier



VP5 (VSR REC5): View from Hiking Trail near Cheung Sha Lan



VP6 (VSR REC6): View from Hiking Trail near Tai Shui Hang



TITLE: **VIEWPOINTS VP4, VP5, VP6**

PROJECT: OPTIMISATION OF LAND USE IN DISCOVERY BAY, SITE 10(b)

DEC 2015

FIGURE:
B.3



VP7 (VSR REC7): View from Peng Chau Promenade



VP8 (VSR REC8): View from Hiking Trail along Peng Yu Path in Peng Chau



VP9 (VSR T1): View from Tai Pak Wan



VP10 (VSR REC9): View from Disneyland Promenade



TITLE: **VIEWPOINTS VP9, VP10**

PROJECT: **OPTIMISATION OF LAND USE IN DISCOVERY BAY, SITE 10(b)**

DEC 2015

FIGURE:
B.5

LEGEND

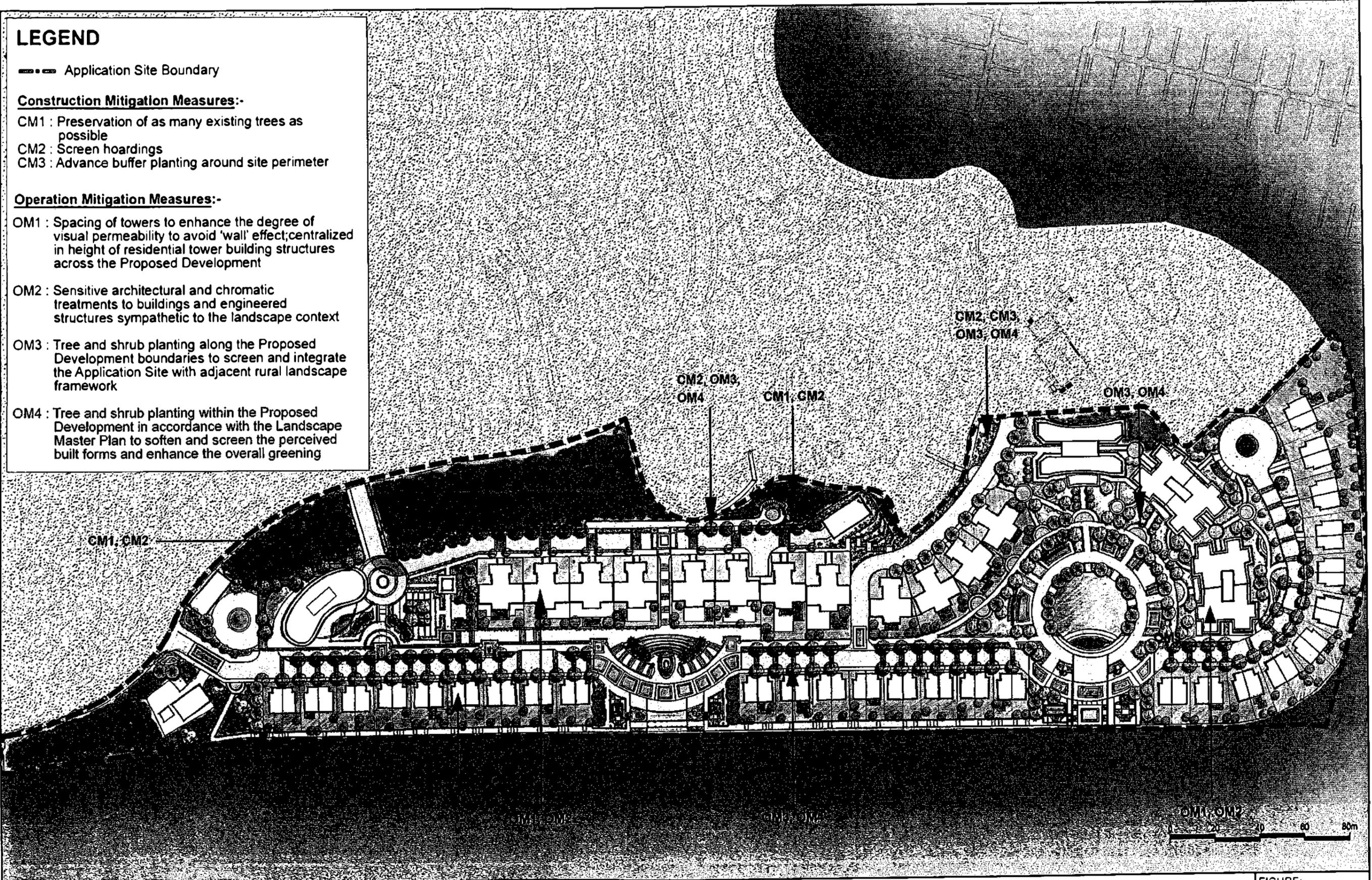
--- Application Site Boundary

Construction Mitigation Measures:-

- CM1 : Preservation of as many existing trees as possible
- CM2 : Screen hoardings
- CM3 : Advance buffer planting around site perimeter

Operation Mitigation Measures:-

- OM1 : Spacing of towers to enhance the degree of visual permeability to avoid 'wall' effect; centralized in height of residential tower building structures across the Proposed Development
- OM2 : Sensitive architectural and chromatic treatments to buildings and engineered structures sympathetic to the landscape context
- OM3 : Tree and shrub planting along the Proposed Development boundaries to screen and integrate the Application Site with adjacent rural landscape framework
- OM4 : Tree and shrub planting within the Proposed Development in accordance with the Landscape Master Plan to soften and screen the perceived built forms and enhance the overall greening

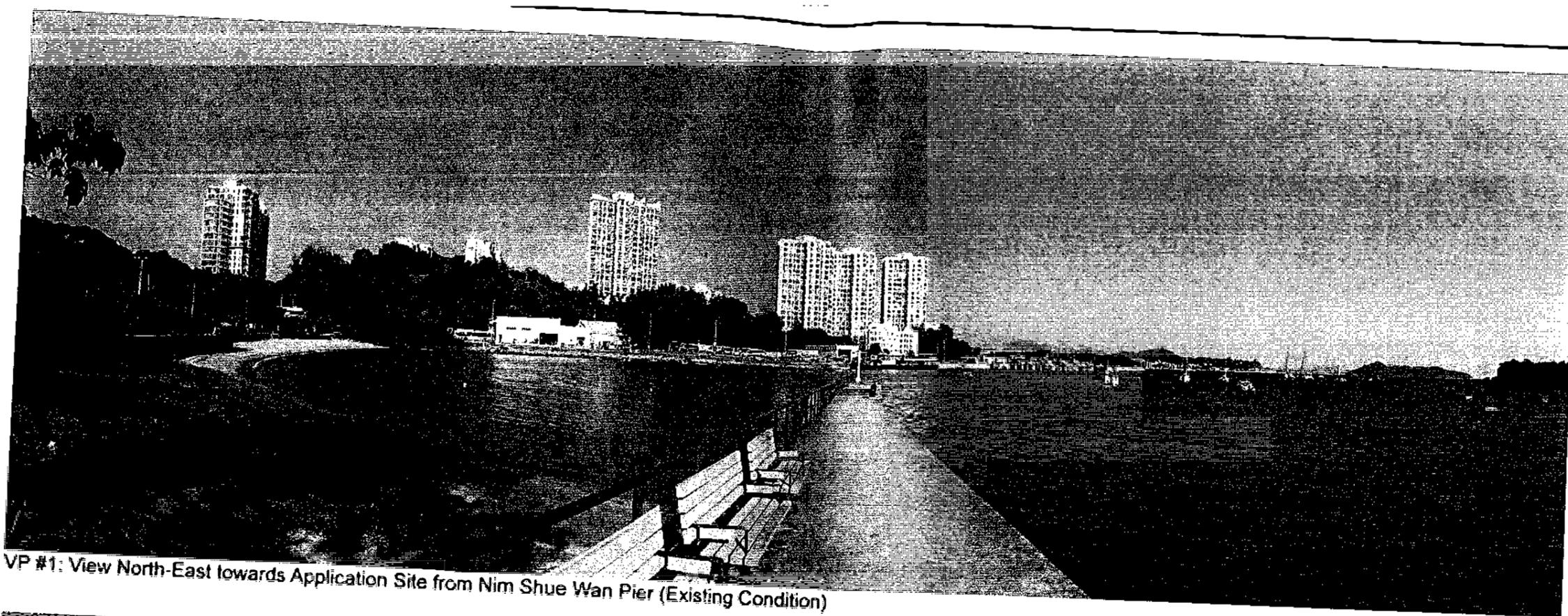


TITLE : **VISUAL MITIGATION MEASURES**

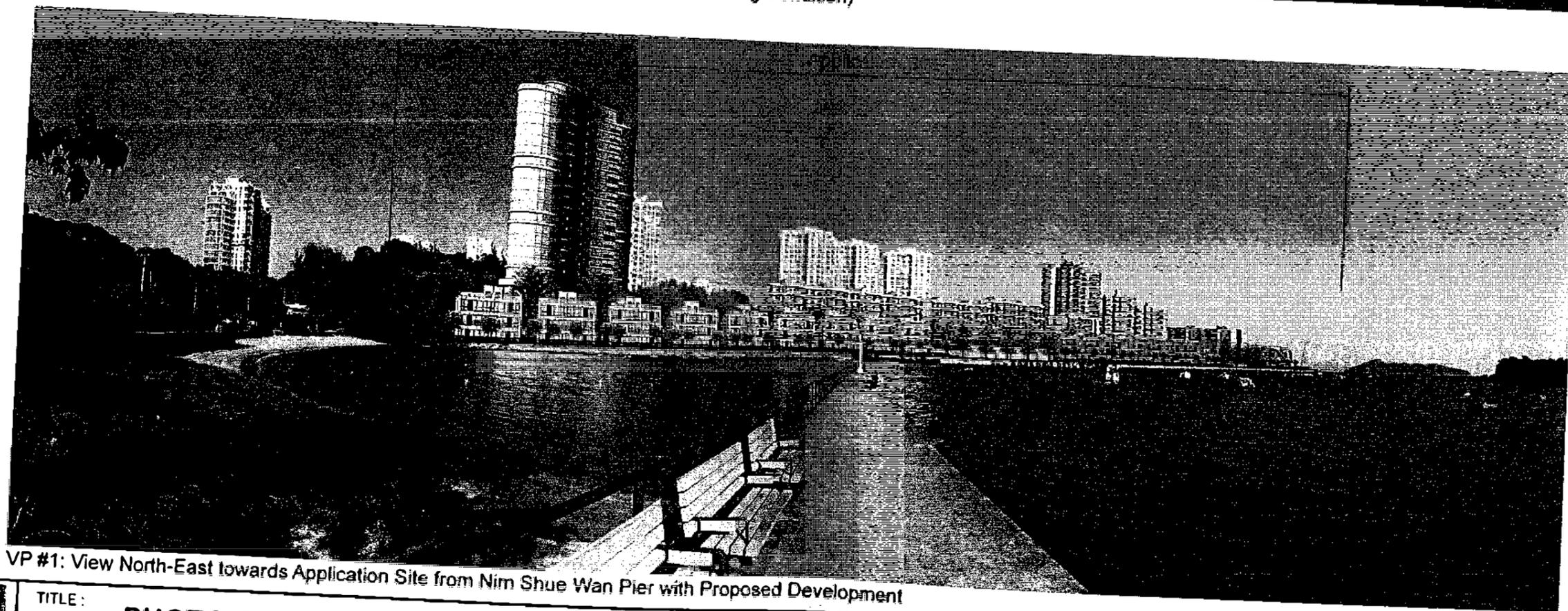
PROJECT : DISCOVERY BAY OPTIMIZATION OF LAND USE - REFINEMENT OF AREAS 10B

DEC 2015

FIGURE: **B.6**



VP #1: View North-East towards Application Site from Nim Shue Wan Pier (Existing Condition)



VP #1: View North-East towards Application Site from Nim Shue Wan Pier with Proposed Development



TITLE: **PHOTOMONTAGE - VIEW POINT #1 (VSR REC1) FROM NIM SHUE WAN PIER**

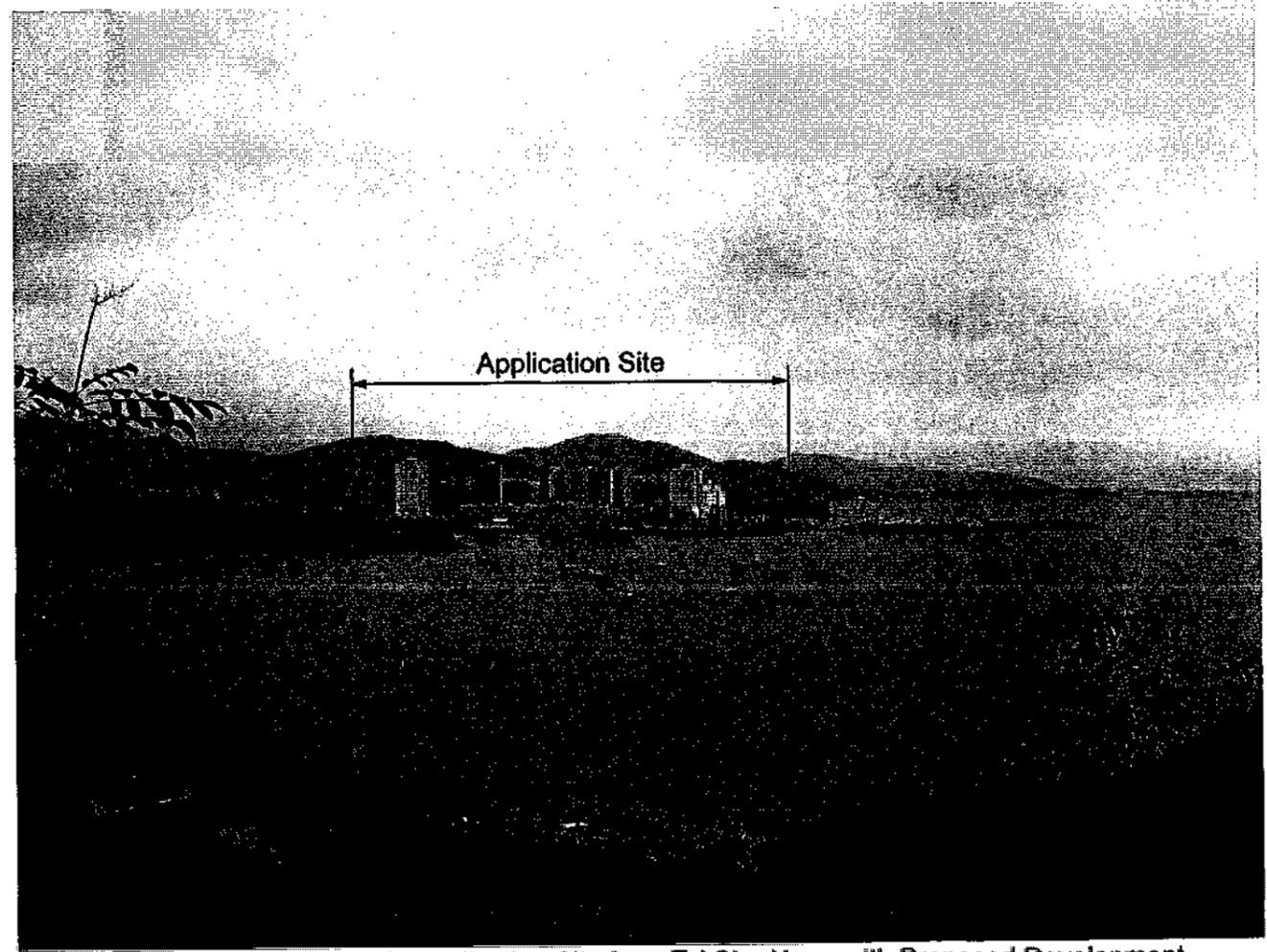
PROJECT: **DISCOVERY BAY OPTIMIZATION OF LAND USE - REFINEMENT OF AREA 10B**

DEC 2015

ANNEX: **B.2**



VP #2: View North-East towards Application Site from Tai Shu Hang (Existing Condition)



VP #2: View North-East towards Application Site from Tai Shu Hang with Proposed Development



TITLE: **PHOTOMONTAGE - VIEW POINT #2 (VSR REC2) FROM TAI SHU HANG**

DEC 2015

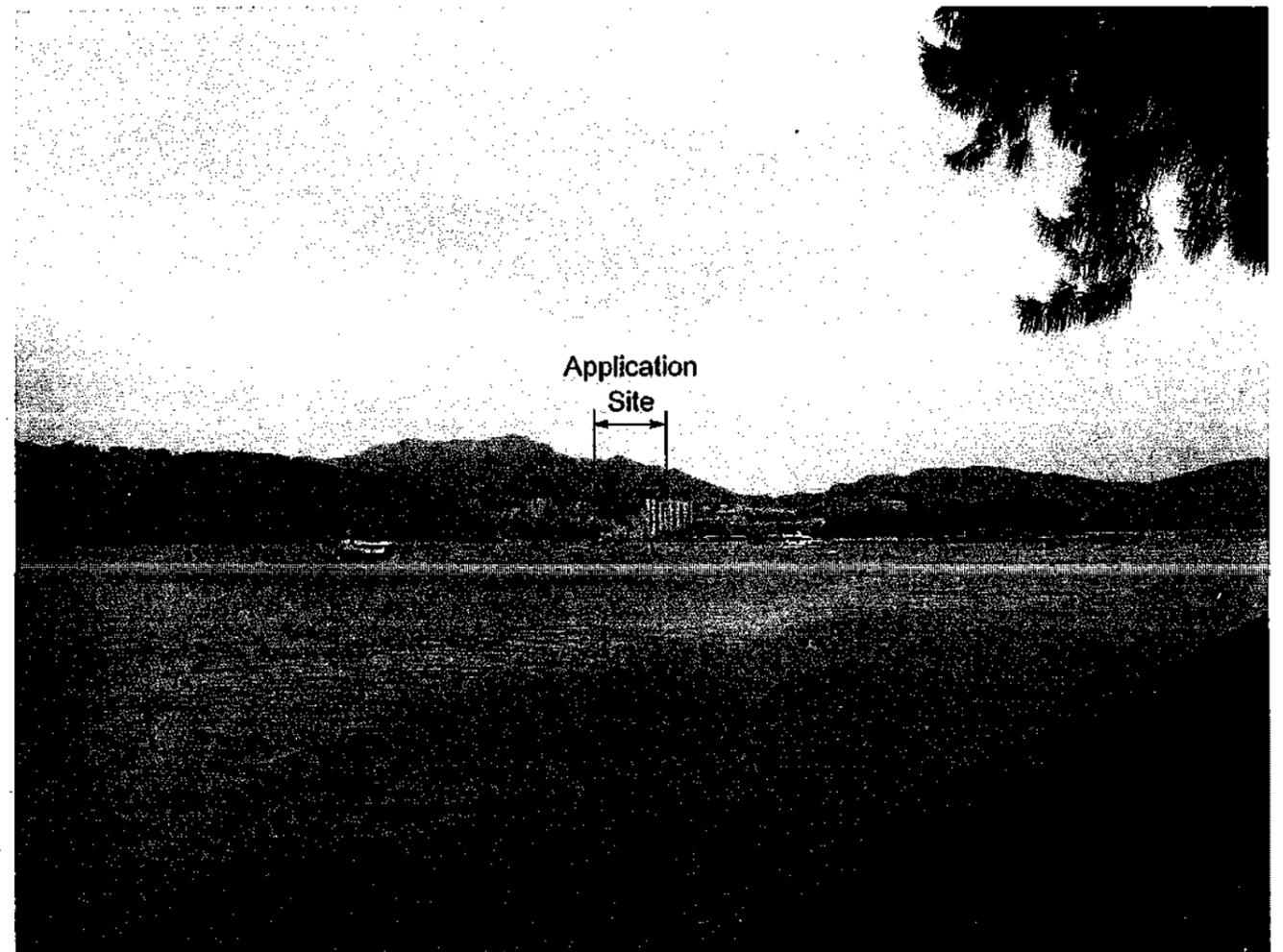
ANNEX:

B.3

PROJECT: DISCOVERY BAY OPTIMIZATION OF LAND USE - REFINEMENT OF AREA 10B



VP #3: View North-West towards Application Site from Peng Chau Island Promenade (Existing Condition)



VP #3: View North-West towards Application Site from Peng Chau Island Promenade with Proposed Development



TITLE:

PHOTOMONTAGE - VIEW POINT #3 (VSR REC3) FROM PENG CHAU ISLAND PROMENADE

DEC 2015

ANNEX:

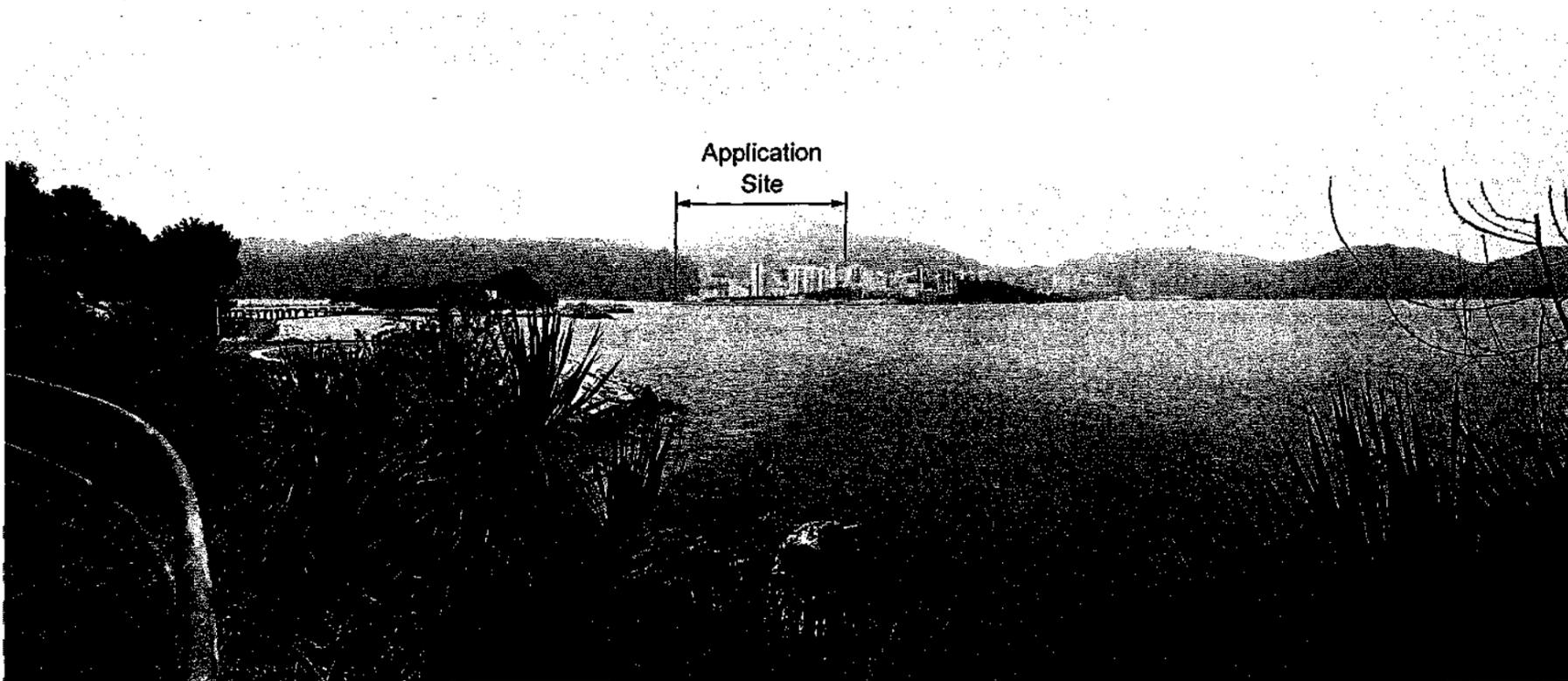
B.4

PROJECT:

DISCOVERY BAY OPTIMIZATION OF LAND USE - REFINEMENT OF AREA 10B



VP #4: View West towards Application Site from Peng Yu Path (Existing Condition)



VP #4: View West towards Application Site from Peng Yu Path with Proposed Development



TITLE: **PHOTOMONTAGE - VIEW POINT #4 (VSR REC4) FROM PENG YU PATH**

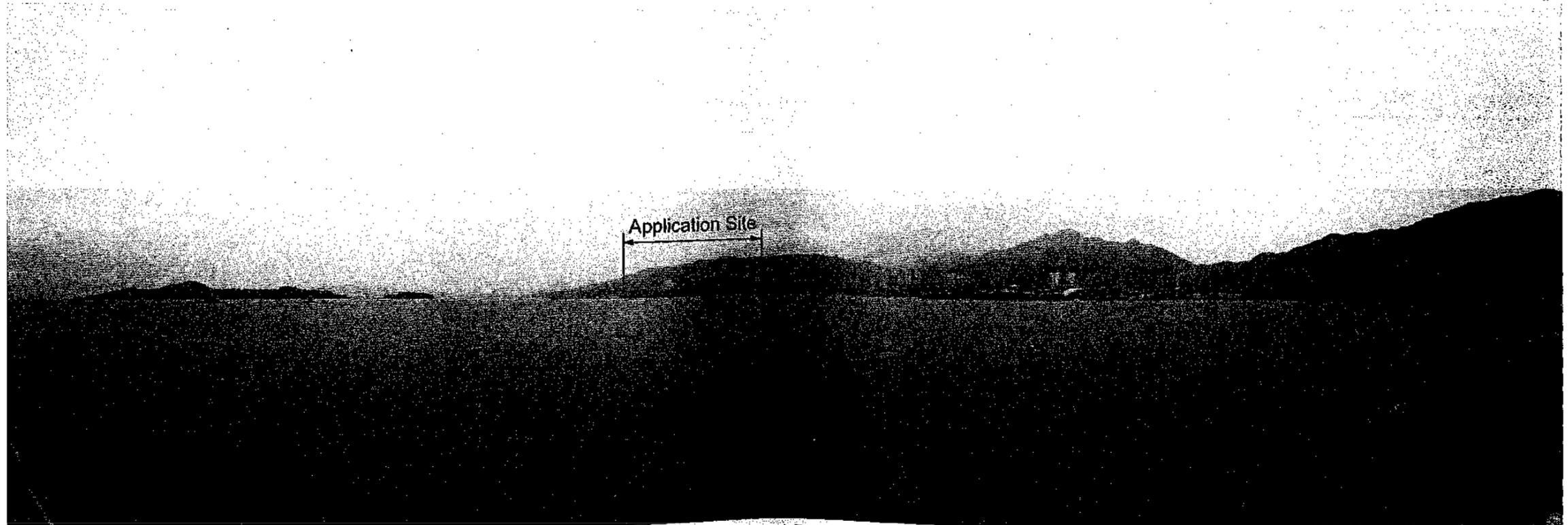
ANNEX: **B.5**

DEC 2015

PROJECT: DISCOVERY BAY OPTIMIZATION OF LAND USE - REFINEMENT OF AREA 10B



VP #5: View South-West towards Application Site from Disneyland Promenade (Existing Condition)



VP #5: View South-West towards Application Site from Disneyland Promenade with Proposed Development



TITLE: **PHOTOMONTAGE - VIEW POINT #5 (VSR REC5) FROM DISNEYLAND PROMENADE**

ANNEX: **B.6**

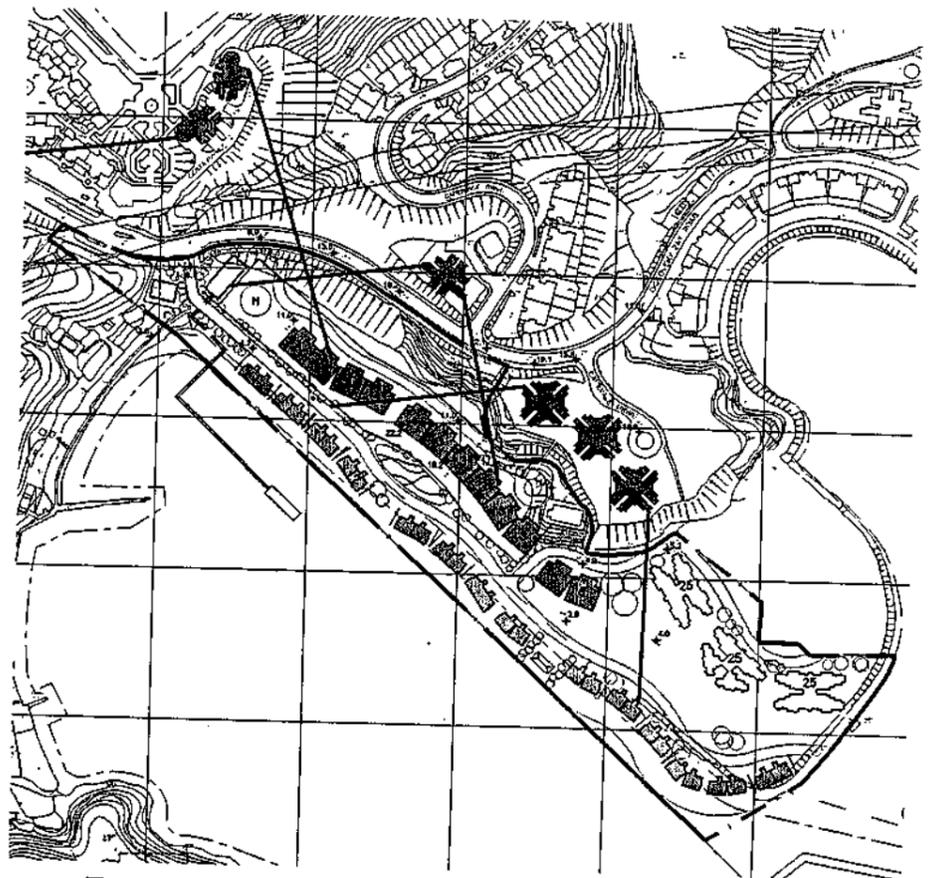
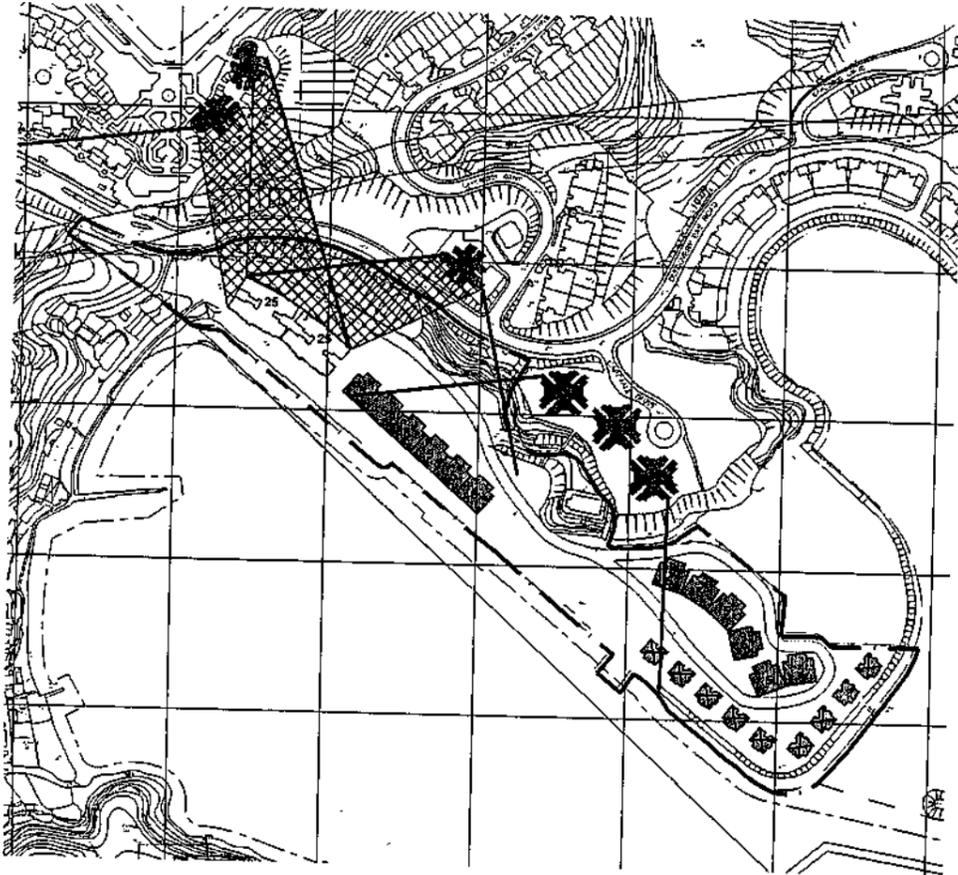
DEC 2015

PROJECT: **DISCOVERY BAY OPTIMIZATION OF LAND USE - REFINEMENT OF AREA 10B**

Appendix F
Floor Plans of Peninsula Village Units

August 2013 Proposal

Current Proposal



-  Existing Residential Towers
-  View Angle
-  View Blockage

- Towers relocated to minimize view disruption to existing residential towers

