THE HONG KONG HOUSING AUTHORITY

Memorandum for the Building Committee

Proposed Master Layout Plan and Project Development Budget for the Redevelopment of Hung Hom Estate Phase 2

PURPOSE

To seek Members' approval to the proposed Master Layout Plan and Development Budget for the Redevelopment of Hung Hom Estate Phase 2.

BACKGROUND

2. Hung Hom Phase 2 is part of the overall Hung Hom Redevelopment Programme that comprises of 2 phases. Phase 1 was already completed in August 1999.

3. Demolition of existing buildings at Phase 2 was completed in September 2000. Site Formation is in progress and will be completed by August 2001.

4. Past events relevant to the project are as follows -

Date	Event
(a) 23 February 1994	Development Progress Committee approved Planning Brief for Redevelopment of Hung Hom Estate. (DPC 12/94 refers)
(b) 15 September 1994	Revised Client Brief, Control Plan and Project Estimate of all Phases approved by BC. (Paper No. BC 119/94 refers)
(c) 30 March 2000	Approval of the Development Parameters and Development Cost Ceiling of Phase 2 by the Strategic Planning Committee. (Paper No. SPC 32/2000 refers).

(d) 27 April 2000 — Development Parameters submitted to other departments for comment.

(e) 31 October 2000 — Revised Development Parameters were circulated to other departments for further comment. No adverse comment was received.

MASTER LAYOUT PLAN

5. The proposed Master Layout Plans attached at **Part I** of **Annex** evolve from the Development Parameters and Conceptual Layout approved by the SPC. The drawings illustrate design main features elaborated as below -

Planning Context and Building Massing

(a) The site is located at prime location of Kowloon Peninsula with magnificent view at all directions, in particular the harbour view. The carpark podium is located towards Hung Hom Road serving as noise buffer to the domestic blocks which are set back towards the longitudinal axis of the site to maximize the development potential, sea view for the domestic blocks and to mitigate the traffic noise impact from the public road.

(b) The site is more than 70% surrounded by industrial buildings and busy public road. A landscape deck, namely, 'Terraced Garden', is introduced between the domestic towers and the carpark podium segregating the pedestrian access from services access by grade. It merges with the carpark podium roof to form a landscaped leisure ground while maintaining natural cross ventilation for the podium.

(c) The podium deck is designed as a main circulation spine linking pedestrian access from Tai Wan Road from the south western direction, residents' flow to commercial centre at Laguna Grande in the north east, and the KMB stand at Hung Hom Road to the east.

6. The development parameters are as follows –

Name	:	Redevelopment of Hung Hom Estate Phase 2
Location	:	J/O Hung Hom Road & Man Yue Street, Hung Hom
Existing Use	:	Public Rental Housing

Existing Zoning	:	Residential (Group A)
Proposed Housing Type	:	HOS
Site Agent (Gross)	:	1.057 ha.
Flat No.	:	1176 (2-bedroom flat : 588 3-bedroom flat : 588)
Total Floor Area (GFA)	:	79,275m²
Overall Plot Ratio	:	7.5
Population	:	3,763
Parking Provision	:	463 private carparking spaces
Retail Provision	:	Nil
Community/ Welfare Facilities	:	Nil

SCHEME DESIGN

7. Drawings attached in **Part I** of **Annex** illustrate the disposition of domestic building blocks, location of accommodation and facilities, vehicular and pedestrian access. The main issues of the proposed Scheme Design are as follows -

Site Specific Block Design

(a) The domestic blocks are designed and oriented to maximize the development potential and panoramic view towards the Victoria Harbour to the south east, Lei Yue Mun to the north east and Lion Rock to the north west.

(b) Domestic blocks entrances for residents are segregated from service vehicles at different level: residents access at the landscaped podium deck level and service access at street level from the service lane at Tai Wan Road.

(c) The typical floor plan is designed to optimize the flat modules and maximize mechanization in construction process.

(d) In terms of finishes and cost standard, the new block in principle makes reference to that of the New Cruciform Block (NCB).

Environmental Design Considerations

(e) The domestic blocks are so oriented and designed to facilitate natural cross ventilation inside the flats, typical lift lobbies, block entrances and at common circulation areas.

(f) The domestic blocks supported on transfer plates are elevated from the landscaped entrance deck. This draws in fresh wind breeze through the podium roof garden to greet residents entering and leaving their blocks.

(g) Balconies are introduced for capturing view, achieving better shading effect and ventilation inside the flat (Balconies are introduced in anticipation of exemption for concerned GFA calculation by Building Department in 2001).

(h) The carpark podium is so designed to facilitate natural cross ventilation. Introduction of the central light well enhances the natural lighting quality to the car parking spaces and also facilitates ventilation.

Vehicular Access

(i) The main vehicular access to carpark, emergency vehicular access (EVA) and refuse collection point is located along Tai Wan Road.

Pedestrian Linkage and Access

(j) The main pedestrian access is from Ma Tau Wai Road. Pedestrian links are provided to KMB stand at Hung Hom Road and the commercial centre at Laguna Grande.

Noise Mitigation Measures

(k) Hung Hom Estate Phase 2 development is affected by traffic noise from Hung Hom Road. Mitigation methods by using the carpark podium as noise barrier and set back of building blocks from major noise sources are adopted. In domestic flats, residual noise mitigation measures are provided by using gasketted windows and provision of air conditioning units.

Automatic Refuse Collection System (ARCS)

(l) Phase 2 is a small, congested and redevelopment site. It is proposed that ARCS will not be provided in Phase 2 according to Paper No. BC 126/98.

LANDSCAPE DESIGN

8. The main issues of the proposed Landscape Design are as follows –

Design Objectives

(a) To utilize the roof space on the various levels of the carpark podium and to provide views for people at different locations, the approach for a "Terraced Garden" is adopted for this development. Residents on the upper levels will have harbour view towards the south eastern direction and overlook the Hutchison Park across Hung Hom Road while those on the lower levels still have the opportunity of views of a terraced podium.

(b) Noise generated by the heavy traffic along Hung Hom Road and Man Yue Street is anticipated. This will be mitigated by placing the 4-storey carpark podium at the eastern part of the site. The noise generating activities will be placed at the far end of the podium to minimize nuisance caused to the residents. The rest of the landscaped areas will cascade down from the upper podium. Together with lush planting, a tranquil environment is created for the residents' enjoyment.

(c) A water pool and cascade will be provided to add interest to the space at the entrance level. The cascade will mask the city noise and bring the cooling effect of water into the garden.

Open Space Arrangement

(d) A series of open spaces will accommodate the facilities for different age groups, e.g. ball courts, children's play area, fitness trail, tai-chi area, chess area and sitting-out area. The open spaces will be defined by the use of feature walls, paving, lighting, pergola, planting, etc.

(e) The main pedestrian entrance will be from Wai Wan Lane while a secondary access will be from Man Yue Street. The space in front of the building forms two quiet courtyards. Feature plants and water feature will be placed in the courtyards to create different atmosphere, yet retaining their unity by using similar design and materials.

(f) Most of the active recreational facilities like ball courts and children's playgrounds will be placed at the eastern part of the upper podium to minimize nuisances. Seats under shade will be provided close to these areas.

(g) The passive recreational facilities like chess area, tai-chi area and sitting-out area will be distributed at the various levels of the carport podium. These areas will be enhanced with seat benches, trees and shrubs for shade and screening, all adequately lit at night-time. The cascade on the 2nd level and the water feature at the ground level will unify the various landscaped podium.

Soft Landscaping

(h) Large amount of planting will be used on the podium and along the parapet wall of the carport decks to soften the building lines and to improve visual quality. Different combination of plant materials is used to define different areas so that each area will have its own character. Entrance courtyards and focal areas will be highlighted by feature plants of vivid-colour species. Ornamental species will be used at most area to provide variety of colours and interest all year round.

PROJECT DEVELOPMENT BUDGET

9. Based on the proposed Scheme Design, the total Project Development Budget for the development is estimated to be $888.411M. The key elements are as follows –

Cost Heads		Work Elements	$M
(a)	Site Development Cost	Site Formation	-
		Demolition	5.862
		Sub-total :	5.862
(b)	Construction Cost	Foundation	69.855
		Building	699.968
		Soft Landscape and Others	1.986
		Sub-total :	771.809
(c)	Other Project Costs [2% on (a) & (b)]	Civil engineering and geotechnical studies, site investigation, material testing and the like	15.553
(d)	Total site Development & Construction Cost [(a) + (b) + (c)] :		793.224
(e)	Project Management Cost [12% of (d)]	Professional Services and Overheads, Consultation Fees and Consultant Site Staff	95.187
(f)	Project Development Budget [(d) + (e)] :		888.411

Note : Development contingencies of $35.175M for non-standard blocks/buildings and elements are included in the Site Development and Construction Costs. These contingencies are allowed in accordance with Paper No. SPC 45/2000 to cover for unforeseen development risks and change in clients' requirements.

10. The relative costs based on the Master Layout in comparison with that to the approved Project Development Cost Ceilings are as follows –

	(a) Project Development Cost ($/m² CFA)	(b) Project Development Cost Ceiling ($/m² CFA)	(c) Project Development Cost Ceiling updated to June 2000 Cost Yardsticks ($/m² CFA)	(d) Unit Construction Cost ($/m² CFA)	(e) June 2000 Construction Cost Yardsticks ($/m² CFA)	(f) June 2000 Construction Cost Yardsticks Adjusted to Tender-in Date ($/m² CFA)
Domestic (HOS)	8,879	10,699	8,882	6,181	5,336 (NCB)	5,619 (NCB)
Private Carpark	6,662	8,348	7,234	4,861	4,095	4,300

Note : For comparing with Construction Cost Yardstick, external works, soft landscaping and other sundry costs such as drainage, utility connections etc. have been excluded from the Unit Construction Cost.

11. The main reasons for the increase of proposed cost over the June 2000 Construction Cost Yardstick prices for NCB are as follows -

(a) Deep and more complicated foundation due to difficult ground condition.

(b) Extra costs for refuge floor construction and building services installation.

12. The Project Development Costs are below the Project Development Cost Ceilings approved by the Strategic Planning Committee vide Paper No. SPC 62/2000.

13. The Project Development Cost for the domestic (HOS) buildings can be further broken down into cost per flat as follows –

Flat Type	Project Development Cost Per Flat ($)	Construction Cost Per Flat ($)	June 2000 Construction Cost Yardstick ($)	June 2000 Construction Cost Yardstick Adjusted to Tender-in-Date ($)
2B	555,381	386,622	333,767	351,468
3B	770,697	536,511	463,165	487,729

Note : External works, soft landscaping and other sundry costs such as drainage, utility connections, etc. have been excluded from the Construction Cost per Flat in comparison with the Construction Cost Yardstick.

Detail cost information are in **Part II** of the **Annex**.

AVAILABILITY OF FUNDS

14. The estimated yearly expenditure of the proposed Budget is shown below and would be included in the next capital budget updating of the Authority –

	Estimated Yearly Expenditure ($/M)			
	2000/01	2001/02	Post 2001/02	Total
Allowed in FC 2/2000	6.768	56.369	675.310	738.447
Estimate based on Proposed Budget	6.027	28.600	853.783	888.411

15. Additional expenditure after 2001/02 will be covered by adjustment in the 2001 budget submission to the Finance Committee.

DEVELOPMENT PROGRAMME

16. The key dates for the development programme are as follows –

(a) Master Layout Plan	PDRC	11/00
(b) Master Layout Plan	BC	01/01
(c) Detailed Design	DDRP	06/01
(d) Piling	Commencement	11/01
	Completion	11/02 (12 months)
(e) Building	Commencement	11/02
	Completion	11/05 (36 months)

RECOMMENDATION

17. It is **recommended** that the proposed Master Layout Plan and Project Development Budget of $888.411M for the Redevelopment of Hung Hom Estate Phase 2 as described above and in the **Annex** to this Paper be approved.

DISCUSSION

18. At the next meeting of the Building Committee to be held on 18 January 2001, Members will be invited to approve the recommendation in paragraph 17 above.

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File Ref. : HD(AR) 7/708/2

Date : 11 January 2001

Scheme Design Concept

1. Site Specific Design Approach for Maximization of Development Potential.

2. Full utilization of Site Opportunities for capturing panoramic harbour view.

3. Setting of Domestic Towers and Carpark Podium to mitigate traffic noise impact from surrounding public road

4. Segregation of pedestrian and vehicular access by grade with block entrance lobbies on landscaped deck linking directly to a 'Terraced Garden' on top of carpark podium.

5. Domestic block layout to optimize flat modules and maximize mechanization in construction process.

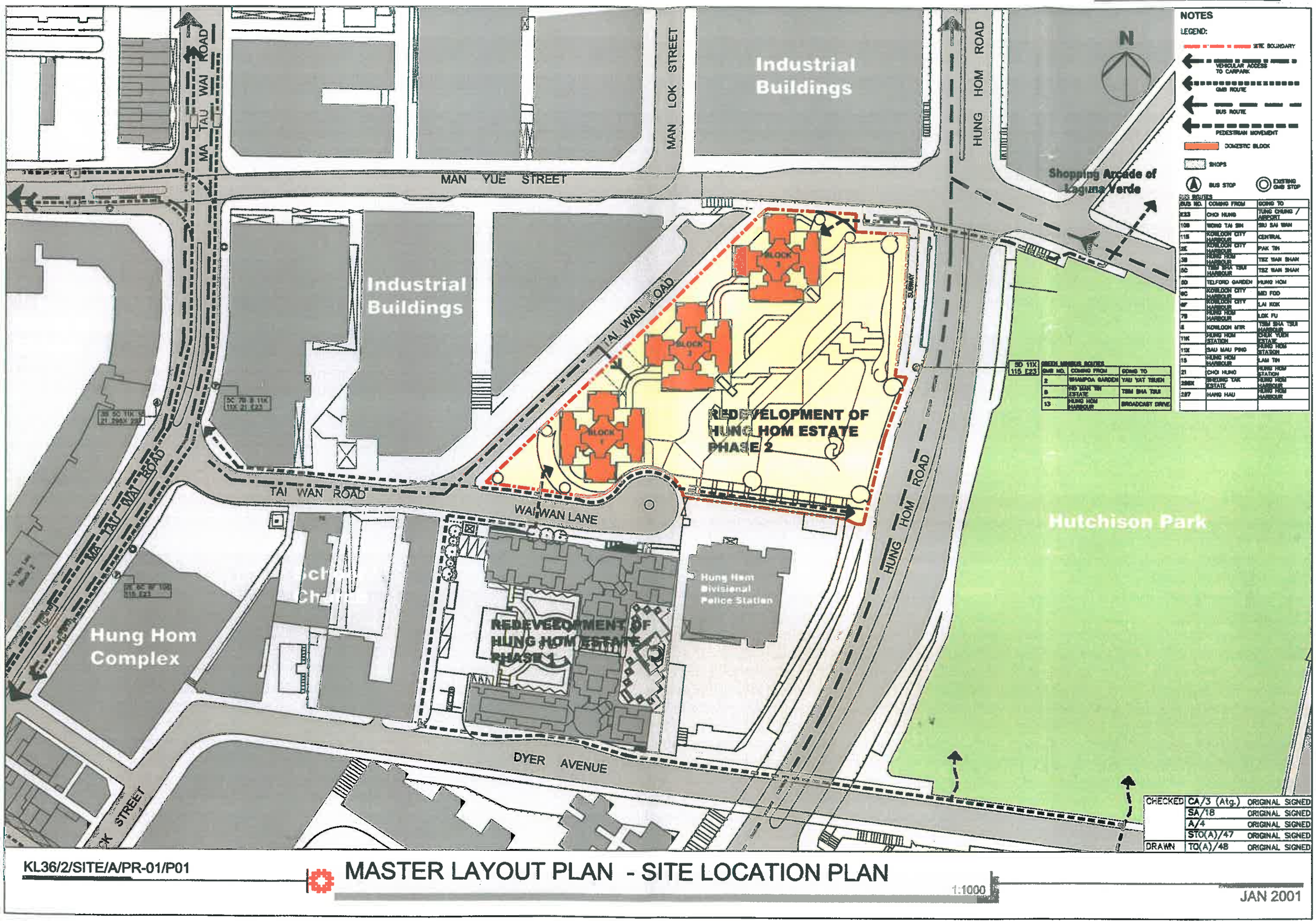
6. Environmental Enhancement

   - Building outlook I site specific and is in harmony with surroundings.

   - Specific integrated design for open space.

   - Introduction of balconies and shading fins at domestic flats to minimize solar heat gain and environmental noise.

Part I of Annex



KL36/2/SITE/A/PR-01/P01

MASTER LAYOUT PLAN - SITE LOCATION PLAN

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JAN 2001

REDEVELOPEMENT OF HUNG HOM ESTATE PHASE 2 - BLOCK 1

DEVELOPEMENT SCHEDULE

SITE AREA (sq.m)	G.F.A. (sq.m)	PLOT RATIO	NO. OF FLATS	NO. OF CAR PARKING
10,570	79,275	7.5	1176	483

FLAT MIX

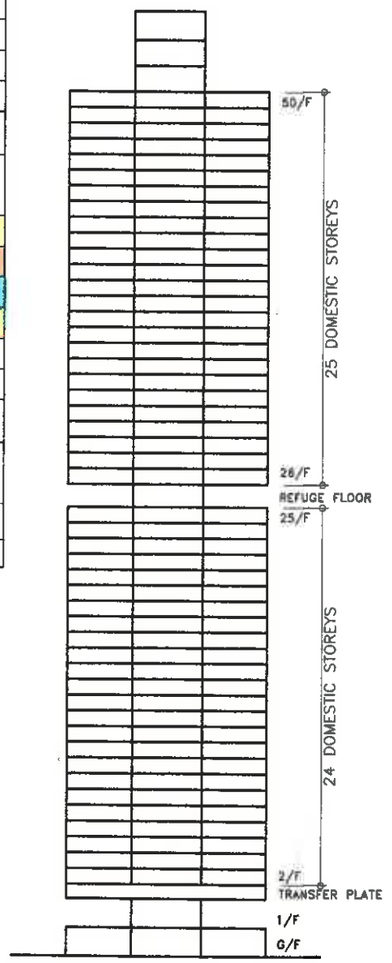
TYPE	FLAT SIZE (sq.m) IFA	(COMPARED W/ NCB)	NUMBER	FLAT MIX
2 BED	36.9	32 - 40	588	50 %
3 BED	51.2	49 - 54	588	50 %
TOTAL			1176	100 %

CALCULATIONS FOR BLOCK 1 (NON-STANDARD BLOCK)

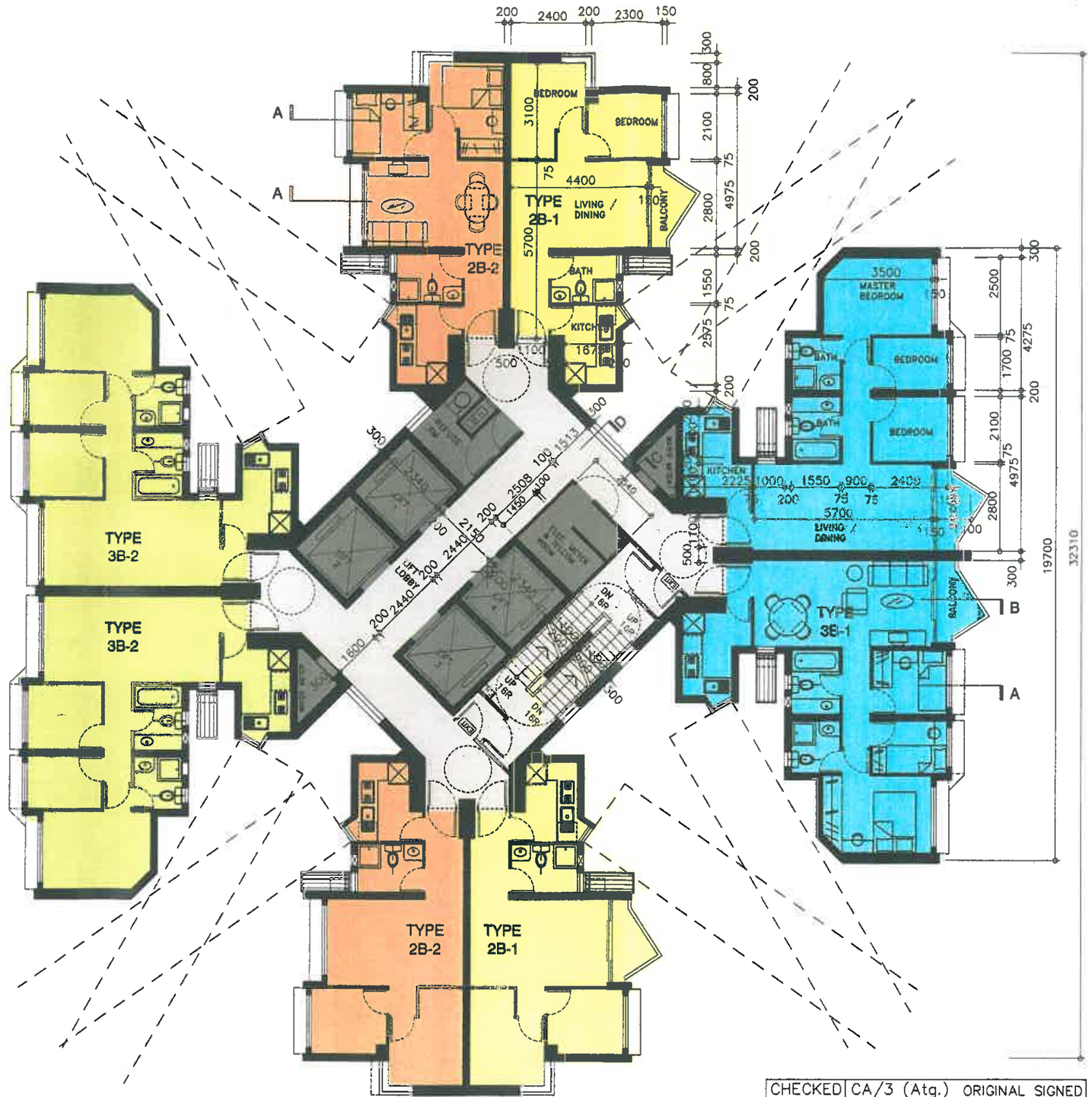
FLAT	GFA (sq.m)	IFA (sq.m)	SFA (sq.m)	EFFICIENCY
2B-1 (w/ balcony)	-	37.6 x 2	46.6 x 2	-
2B-2 (w/o balcony)	-	37.6 x 2	43.9 x 2	-
3B-1 (w/ balcony)	-	52.0 x 2	63.1 x 2	-
3B-2 (w/o balcony)	-	52.0 x 2	60.2 x 2	-
TOTAL/FLOOR	531.2	-	427.6	80.5 %

EFFICIENCY COMPARISON W/ NCB

TYPICAL FLOOR	GFA (sq.m)	SFA (sq.m)	EFFICIENCY
NON-STANDARD BLOCK (BALCONY EXCLUDED FOR SFA)	530.6	416.4	78.5 %
NCB	-		77.4%



SCHEMATIC SECTION



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	A/4	ORIGINAL SIGNED
	STO(A)/47	ORIGINAL SIGNED
DRAWN	TO(A)/48	ORIGINAL SIGNED

KL36/2/BLK1/A/PR-01/P01

BLOCK 1 - TYPICAL FLOOR PLAN

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REDEVELOPMENT OF HUNG HOM ESTATE PHASE 2

JAN 2001

REDEVELOPEMENT OF HUNG HOM ESTATE PHASE 2 - BLOCK 2 & 3

DEVELOPEMENT SCHEDULE

SITE AREA (sq.m)	G.F.A. (sq.m)	PLOT RATIO	NO. OF FLATS	NO. OF CAR PARKING
10,570	79,275	7.5	1176	463

FLAT MIX

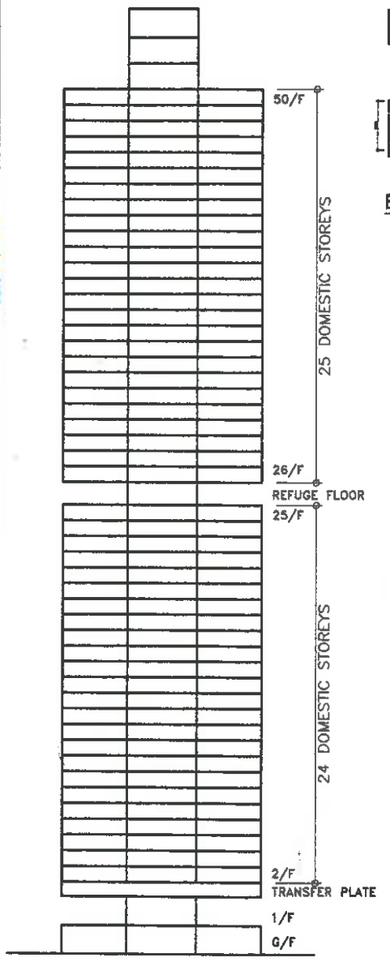
TYPE	FLAT SIZE (sq.m) IFA	(COMPARED W/ NCB)	NUMBER	FLAT MIX
2 BED	36.9	32 - 40	588	50 %
3 BED	51.2	49 - 54	588	50 %
TOTAL			1176	100 %

CALCULATIONS FOR BLOCK 2 & 3 (NON-STANDARD BLOCK)

FLAT	GFA (sq.m)	IFA (sq.m)	SFA (sq.m)	EFFICIENCY
2B-1 (w/ balcony)	-	37.6 x 2	46.6 x 2	-
2B-2 (w/o balcony)	-	37.6 x 2	43.9 x 2	-
3B-1 (w/ balcony)	-	52.0 x 4	63.1x 4	-
TOTAL/FLOOR	531.2	-	433.4	81.6 %

EFFICIENCY COMPARISON W/ NCB

TYPICAL FLOOR	GFA (sq.m)	SFA (sq.m)	EFFICIENCY
NON-STANDARD BLOCK (BALCONY EXCLUDED FOR SFA)	530.6	416.4	78.5 %
NCB	-		77.4%



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DRAWN	TO(A)/48	ORIGINAL SIGNED

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BLOCK 2&3 - TYPICAL FLOOR PLAN

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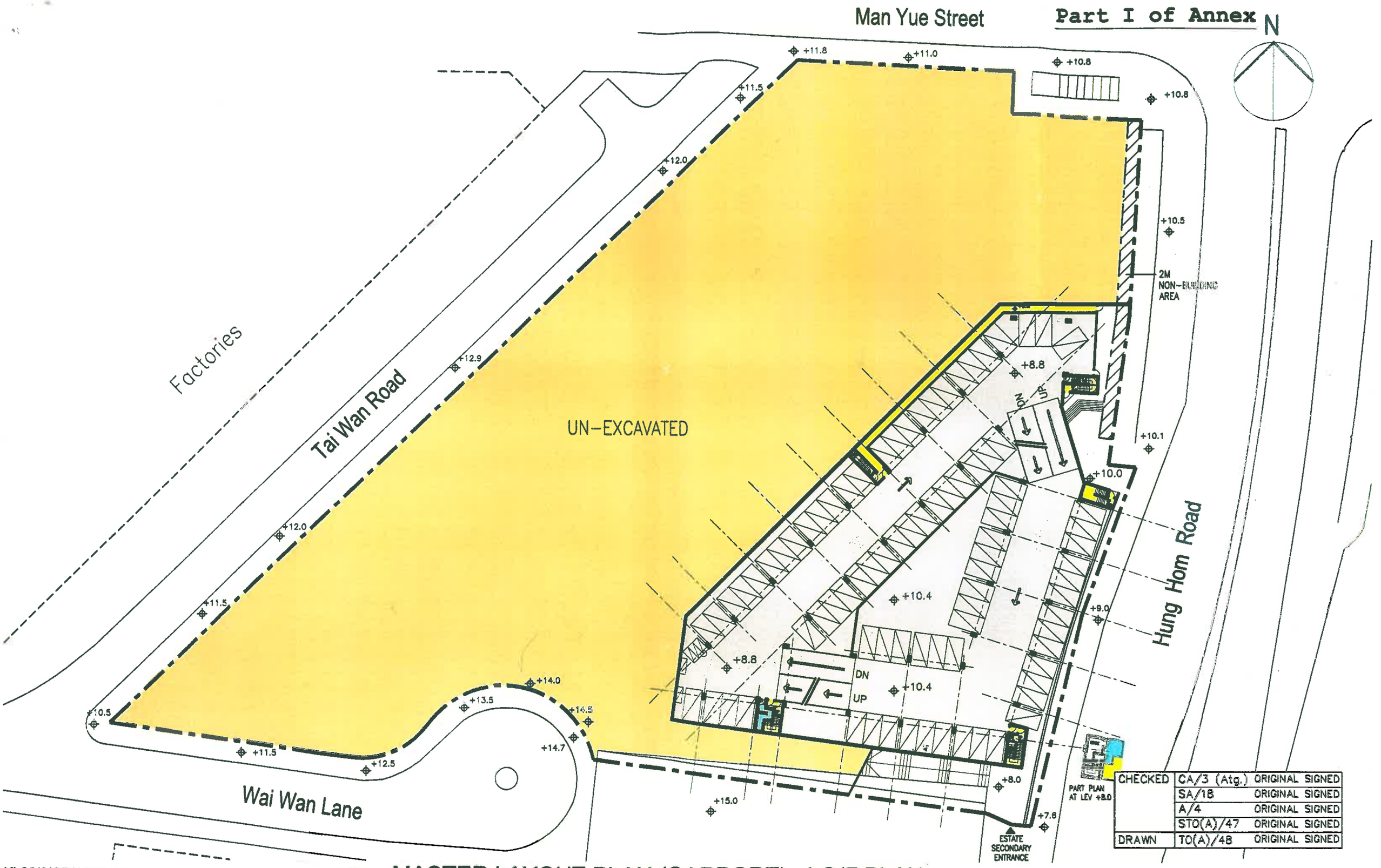
JAN 2001

REDEVELOPMENT OF HUNG HOM ESTATE PHASE 2

Part I of Annex



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DRAWN	TO(A)/48	ORIGINAL SIGNED

KL36/2/CP/A/PR-01

MASTER LAYOUT PLAN (CARPORT) - LG/F PLAN

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JAN 2001

REDEVELOPMENT OF HUNG HOM ESTATE PHASE 2

Part I of Annex

Man Yue Street

N

Factories

Tai Wan Road

Hung Hom Road

Wai Wan Lane

FIREMAN LIFT AND ESCAPE STAIRCASE ACCESSED FROM TAI WAN ROAD FOR ALL BLOCKS

ESTATE SECONDARY ENTRANCE

UNDERGROUND PEDESTRIAN TUNNEL TO HUTCHISON PARK

BLK 1

BLK 2

BLK 3

REFUSE

TX

SWITCH RM

TBE

FS

PUMP RM. & TANKS

RCP

SHROFF OFFICE

STORE

MAIN TBE

JP

SPRINKLER PUMP RM

CARPARK TX

FAN ROOM

FIXED FIRE PUMP RM

MAIN SWITCH RM

LOADING/ UNLOADING

IN

OUT

DN

UP

CARPARK
TOTAL 452 CARPARKS
29 MOTORCYCLE PARKINGS

2M NON-BUILDING AREA

ESTATE SCULPTURE

+11.8 +11.0 +10.8 +10.8 +11.5 +12.0 +12.2 +12.0 +12.9 +12.7 +12.0 +12.0 +11.85 +11.5 +13.2 +11.5 +10.5 +11.5 +12.5 +13.5 +14.0 +14.7 +14.7 +10.5 +10.1 +9.0 +12.0 +14.4 +11.9 +8.0 +15.0 +7.6

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	STO(A)/47	ORIGINAL SIGNED
DRAWN	TO(A)/48	ORIGINAL SIGNED

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MASTER LAYOUT PLAN (CARPORT) - G/F PLAN

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REDEVELOPMENT OF HUNG HOM ESTATE PHASE 2

JAN 2001

Part I of Annex

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	STO(A)/47	ORIGINAL SIGNED
DRAWN	TO(A)/48	ORIGINAL SIGNED

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KL36/2/CP/A/PR-03/P01

MASTER LAYOUT PLAN (CARPORT) - 1/F PLAN

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REDEVELOPMENT OF HUNG HOM ESTATE PHASE 2

Part I of Annex

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	A/4	ORIGINAL SIGNED
	STO(A)/47	ORIGINAL SIGNED
DRAWN	TO(A)/48	ORIGINAL SIGNED

KL36/2/CP/A/PR-04/P01

MASTER LAYOUT PLAN (CARPORT) - 2/F PLAN

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JAN 2001

REDEVELOPMENT OF HUNG HOM ESTATE PHASE 2

Man Yue Street C

N

BLOCK 3

BLOCK 2

BLOCK 1

TENSILE ROOF FEATURE

CHILDREN PLAYGROUND

2M NON BUILDING AREA

Terraced Garden

Factories

Tai Wan Road

Hung Hom Road

Wai Wan Lane

A

B

C

+11.0

+10.8

+10.5

+10.1

+17.0

+22.8

+23.2

+23.6

+22.4

+19.2

+18.0

+24.0

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DRAWN	TO(A)/48	ORIGINAL SIGNED

KL36/2/CP/A/PR-05/P01

MASTER LAYOUT PLAN (CARPORT) - R/F PLAN

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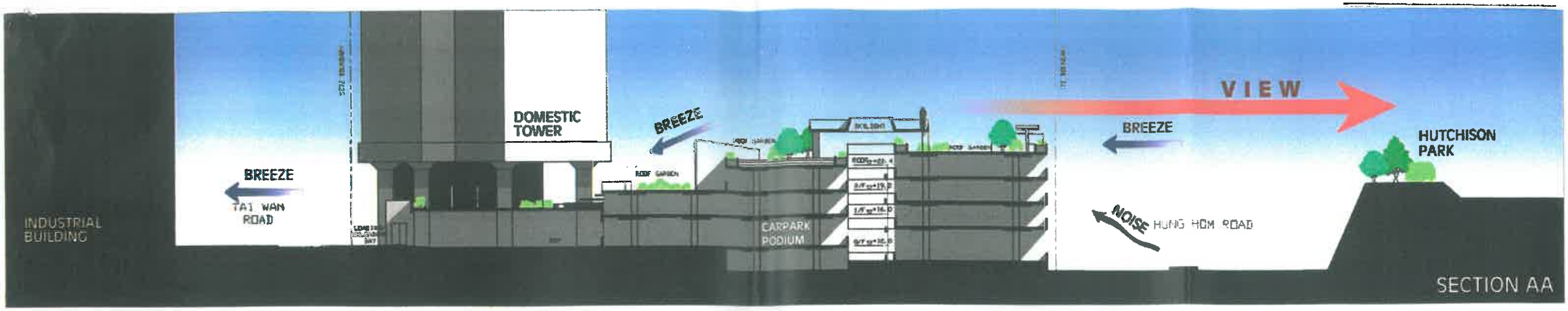
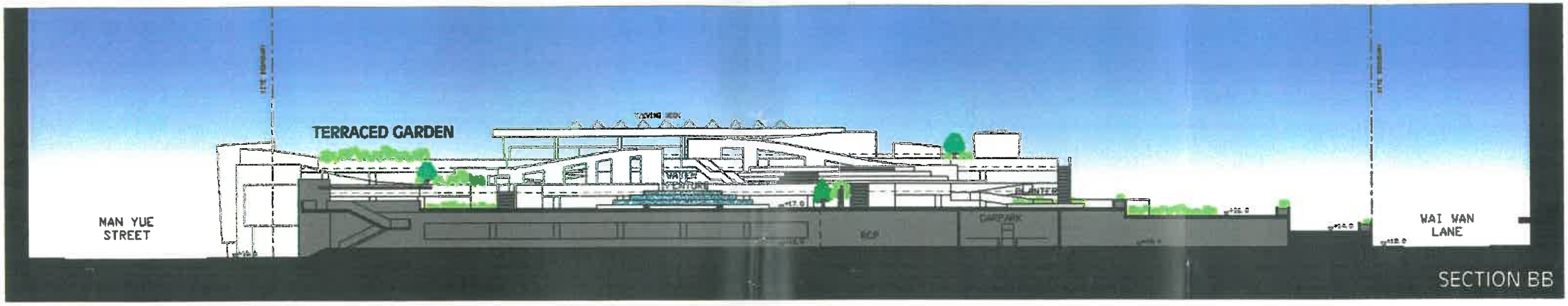
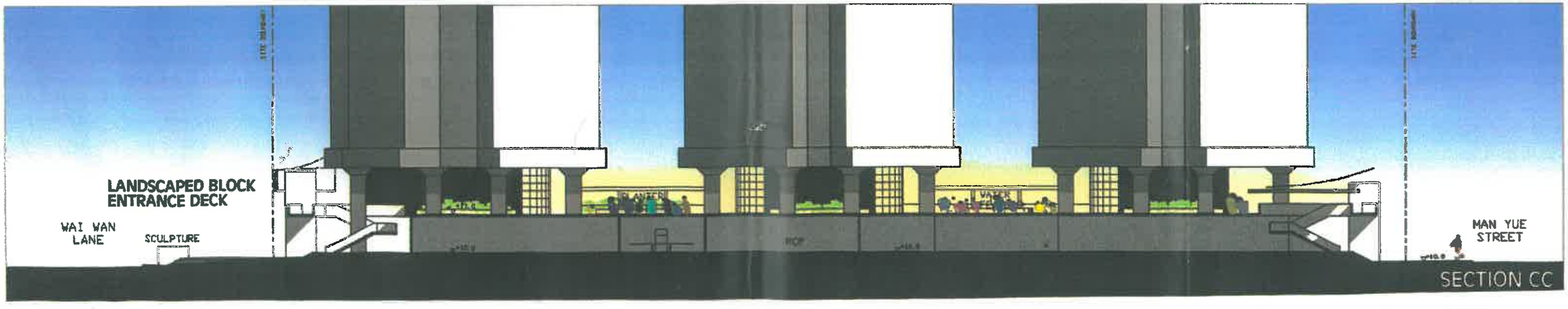
JAN 2001

REDEVELOPMENT OF HUNG HOM ESTATE PHASE 2







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MASTER LAYOUT PLAN (CARPORT) - SECTIONS

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REDEVELOPMENT OF HUNG HOM ESTATE PHASE 2

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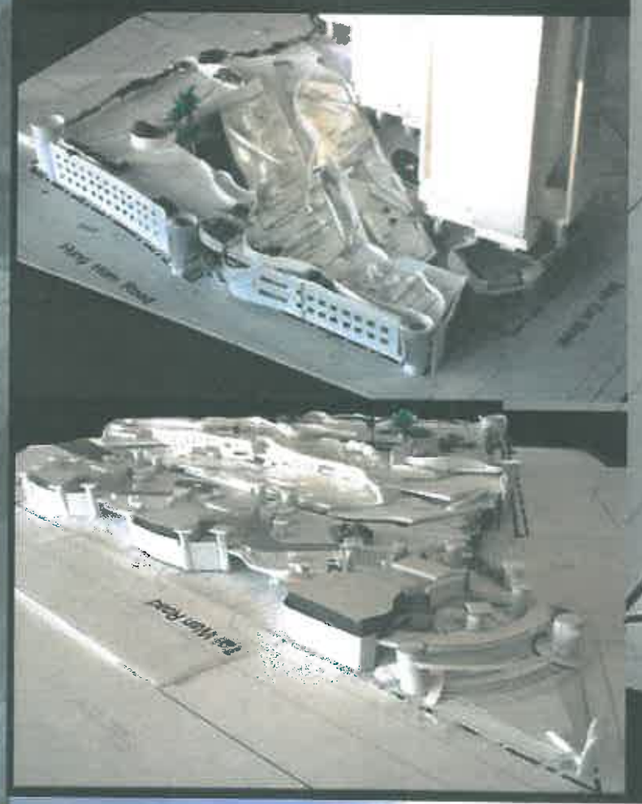
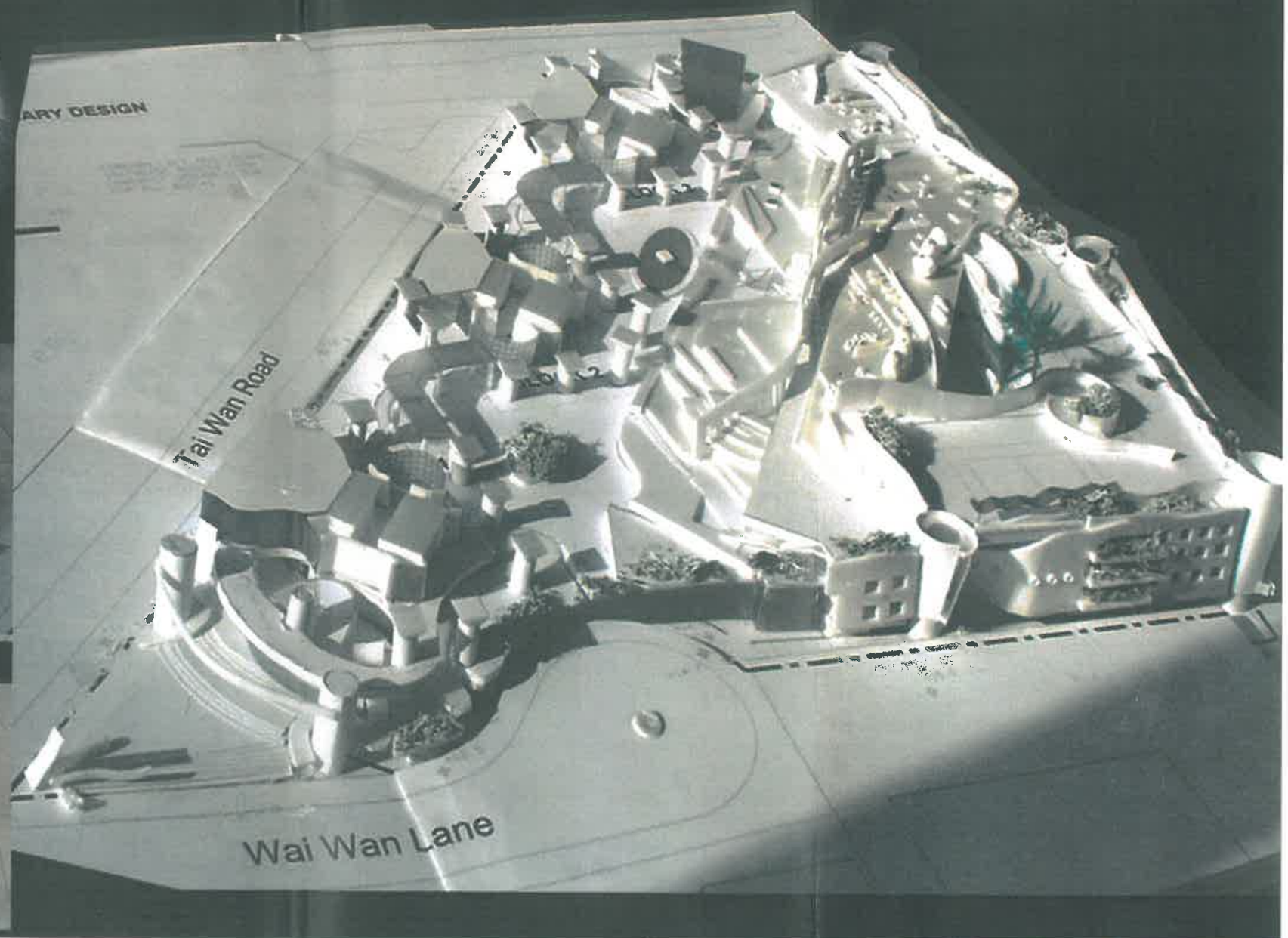
JAN 2001

Part I of Annex





Panoramic Sea View

view analysis

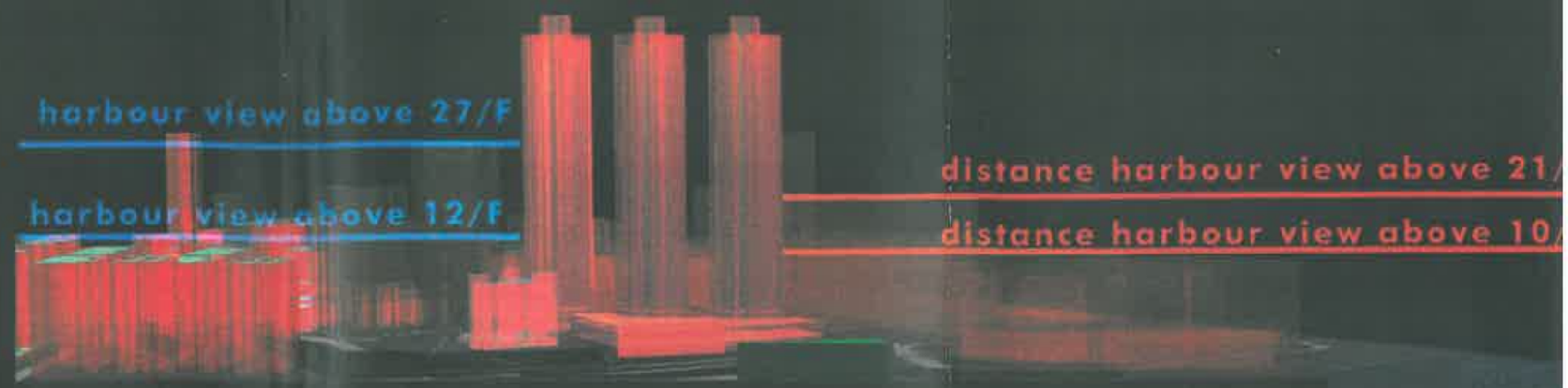
flat no.	type of views
623 53%	harbour view
306 26%	distance view
124 11.5%	Hutchison Park view
123 11.5%	Other view

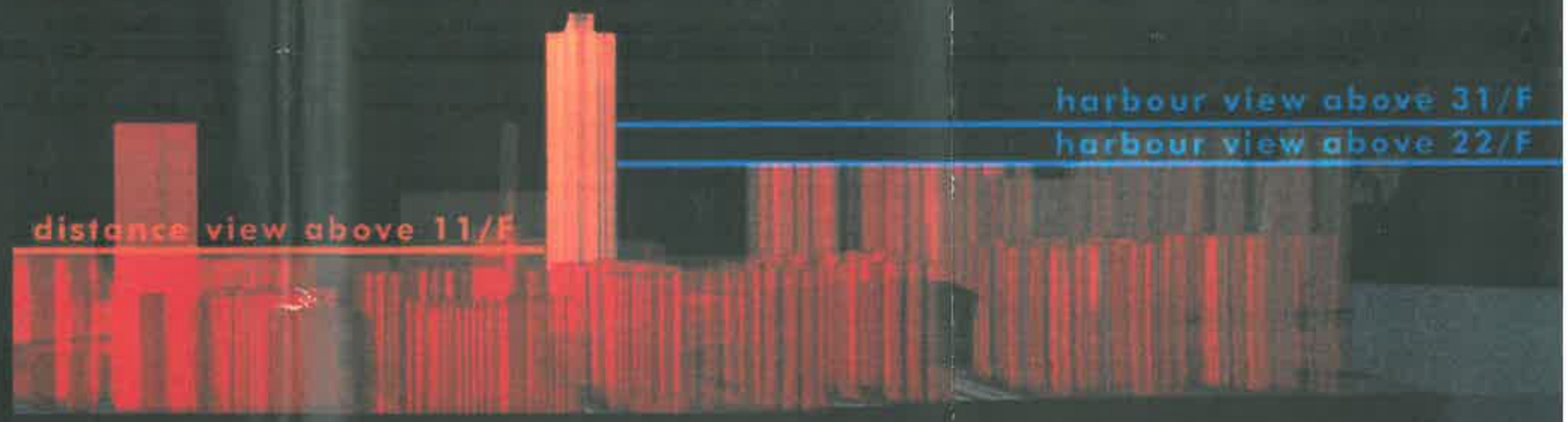
total= 1176 flats

BLOCK 1

BLOCK 2

BLOCK 3





maximization of sea view

PHASE 2

ANALYSIS OF SITE DEVELOPMENT & CONSTRUCTION COST BUDGET NO. 4
(For Financial Viability Assessment Purpose)

PROJECT :Redevelopment of Hung Hom Estate Phase 2 PHDP Code : _____

Budget Costs (incl. common elements apportioned across all phases within the Whole Development Site)	COST PORTIONS								Total
	PRH	HOS	RP	CP	WEL	PTI	UN	GN	
A. Phase 2 (Budget no. 4)	m^2	m^2	m^2	m^2	m^2	m^2	m^2	m^2	m^2
CFA of Cost Portions (m2)		87,815		15,555			570		103,940
	Estimated Cost in $,000								
1.0 Site Development Costs									
1.1 Demolition		4,953		877			32		5,862
1.2 Site Formation		-		-			-		-
2.0 Construction Costs									
2.1 Foundation (incl. caps)		66,450		2,974			431		69,855
2.2 Building (incl. building services)		551,577		76,423			4,260		632,260
2.3 Transfer Structures		15,834		2,805			103		18,741
2.4 External Works		41,370		7,328			269		48,967
2.5 Automated Refuse Collection System		-		-			-		-
2.6 Public Transport Interchange		-		-			-		0
2.7 Other Separate Contracts (Incl. soft landscape)		1,678		297			11		1,986
3.0 Other Project Costs									
3.1 Other Project Costs		13,637		1,814			102		15,553
Budget of Phase 2 (Budget no. 4) Projected to Date of Tenders (A)		695,499		92,518			5,208		793,224
(Unit Cost in terms of $/m2 CFA) :-		7,920		5,948			9,137		7,632

Legend for Cost Portions :

PRH - Public Rental Housing
HOS - Home Ownership Scheme
WEL - Welfare Facilities
RP - Retail shops
CP - Private Car Carpark
GN - Government Non-reimbursable
PTI - Public Transport Interchange
UN - Unallocable

Notes :

(1) All prices are at June 2000 price level and adjusted for tender price inflation to tender in dates of contracts based on 1.2% per annum from June 2000 to December 2000 and 3% per annum from January 2001 onwards.
(2) Special External Works cost comprises both foundation and building costs of those items classified as special external works included in building contract.
(3) Apportionment of the Site Development and Construction Costs are in accordance with the existing cost apportionment guidelines set out in relevant DCMBI.
(4) Development Contingencies are set at 2% for all standard blocks superstructure and 5% for all non-standard blocks and all standard block elements other than superstructure.
(5) Other Project Costs (e.g. traffic and environmental studies, land surveying studies, site potential and other engineering studies, site investigation, geotechnical advisory services, construction material test, piling test carried out by direct testing contractor, etc.) are set at 2% on the Site Development Costs, Construction Costs and Development Contingencies.

Exclusions :

(1) Project Management Costs, e.g. professional services & overheads, consultant fees, etc.

Basis of the Estimate :

Refer Summary Sheet of each Phase

Prepared by : Michael W.K. Ching D.G.Jones & Partners (HK) Ltd.

Date : 16 December 2000

SUMMARY OF SITE DEVELOPMENT & CONSTRUCTION COST BUDGET NO. 4

PROJECT : Redevelopment of Hung Hom Estate **Phase :** 2 **PHDP Code :**

	COST HEADS	WORK ELEMENTS	BUDGET COST (SM)
(a)	Site Development Cost	Site Formation	-
		Demolition	5.862
		Sub-total :	5.862
(b)	Construction Cost	Foundation	69.855
		Building	701.118
		Other separate contracts	0.836
		Sub-total :	771.809
(c)	Other Project Cost (2% on (a) & (b))	Civil engineering and geotechnical studies, site investigation, material testing and the like	15.553
(d)		Total Site Development and Construction Cost (a) + (b) + (c) :	793.224

Notes :

(1) All prices are at June 2000 price level and adjusted for tender price inflation to tender in dates of contracts based on 1.2 % per annum from June 2000 to December 2000 and 3% per annum from January 2001 onwards.

(2) Apportionment of the Construction Costs are in accordance with the existing cost apportionment guidelines set out in relevant DCMBI.

(3) Reasons for Cost Difference from Standard Cost Yardsticks are highlighted.

(4) The costs for softlandscaping works, utilities connections, diversion works by Government Departments or Utility Companies, and minor works carried out specifically for the project, eg. Roadworks or slopeworks outside boundaries under separate contracts but charged to the project are grouped under Other Separate Contracts.

(5) The fluctuation provisions is worked out based on the formula as shown on the Buidance Notes for Standard Cost Yardsticks.

(6) Development contingencies of $35.175 M for non-standard blocks/buildings and non-standard elements such as civil engineering works (site formation, slope protection, etc.) demolition, foundation, external works and underground drainage, etc. are included in the Site Development and Construction Cost.

Inclusions :

Exclusions :

(1) Project Management Costs, e.g. professional services & overheads, consultant fees and Construction Site Staff.

(2) Publicity cost, financing and legal costs/expenses, etc.

Assumptions :

Basis of the Budget :

(1) Please refer to Phase Summary.

Prepared by Michael W.K. Ching D.G. Jones & Partners (HK) Ltd.

Date : 16 December 2000

SUMMARY OF SITE DEVELOPMENT & CONSTRUCTION COST BUDGET NO. 4

PHASE 2

PROJECT : Redevelopment of Hung Hom Estate PHASE : 2 PHDP Code : _____

	COST PORTIONS								Common Items		
	PRH	HOS	RP	CP	WEL	PTI	UN	GN	TS	EW	Total
CFA of Cost Portions (m2)	-	87,815		15,555		-	570	-			103,940
COST ITEMS	Estimated Cost in $,000										
A. Site Development & Construction Cost Budget At June 00 (Excluding Fluctuations & Tender Price Inflation)											
1.0 Site Development Costs											
1.1 Site Formation Contract											
1.2 Demolition Contract		4,953		877			32				5,862
2.0 Construction Costs											
2.1 Foundation Contract (incl. site formation & caps)		64,766		2,899			420			0	68,085
2.2 Building Contract											
2.21 Building (excl. building services)		430,914		64,269			3,367				498,550
2.22 Building Services		91,413		8,101			667				100,181
2.23 External Works for commonly shared elements										46,370	46,370
2.24 External Works for Specific Businesses											
2.25 Automated Refuse Collection System											
2.26 Transfer Structures									17,747		17,747
2.3 Other Separate Contracts (incl. Soft/landscape)										1,881	1,881
Cost Budget At June 00 Price Level (A)		592,046		76,146			4,486		17,747	48,251	738,676
B. Site Development & Construction Cost Budget At June 00 (Incl. Tender Price Inflation) (Cost in Item (A) plus Cost x (v), (w), (y) or (z))											
1.0 Site Development Costs — Contract Total ($'M)											
1.1 Site Formation Contract -											
1.2 Demolition Contract $5.862		4,953		877			32				5,862
2.0 Construction Costs											
2.1 Foundation Contract (incl. Site formation & caps) $69.855		66,450		2,974			431			0	69,855
2.2 Building Contract $699.968											
2.21 Building (excl. building services) -		455,045		67,868			3,556				526,469
2.22 Building Services -		96,532		8,555			704				105,791
2.23 External Works for commonly shared elements -											
2.24 External Works for Specific Businesses -										48,967	48,967
2.25 Automated Refuse Collection System -											
2.26 Transfer Structures -									18,741		18,741
2.3 Other Separate Contracts (incl. Soft/landscape) $1,986										1,986	1,986
$777.671											
Cost Budget To Proposed Dates Of Tenders (B)		622,980		80,274			4,723		18,741	50,953	777,671

Types of Contract

Site Formation
Demolition
Foundation (incl. caps)
Building & Footing (for inflation adjustment, "External Works", "Others", etc., Tender-In Dates to be taken the same as "Building")

Tender In Dates Adjustment for months after Jun 00

	-	Months x 1.2 % / 12	-	Months x 3 % / 12 =	-	(v)
Mar 2000	0	Months x 1.2 % / 12	0	Months x 3 % / 12 =	0.00000	(w)
Aug 2001	6	Months x 1.2 % / 12	8	Months x 3 % / 12 =	0.02600	(y)
Aug 2002	6	Months x 1.2 % / 12	20	Months x 3 % / 12 =	0.05600	(z)

For the basis, exclusions and notes of this Cost Budget, please refer to information shown on Page 2.

PART II OF ANNEX

SUMMARY OF SITE DEVELOPMENT & CONSTRUCTION COST BUDGET NO. 4 (cont'd)

PROJECT : Redevelopment of Hung Hom Estate PHASE : 2 PHDP Code : _____

Legend for Cost Portions :

PRH	-	Public Rental Housing	CP	-	Private Car Carpark	UN	- Unallocable
HOS	-	Home Ownership Scheme	PTI	-	Public Transport Interchange	GN	- Government Non-reimbursable
RP	-	Retail shops	TS	-	Transfer Structure		
WEL	-	Welfare Facilities	EW	-	External Works		

Notes :

(1) All prices are at June 2000 price level and adjusted for tender price inflation to tender in dates of contracts based on 1.2% per annum from June 2000 to December 2000 and 3% per annum from January 2001 onwards.

(2) Apportionment of the Construction Costs are in accordance with the existing cost apportionment guidelines set out in relevant DCMBI.

Inclusions :

Exclusions :

(1) Project Management Costs, e.g. professional services & overheads, consultant fees, etc.

Assumptions :

(1) The finishing standard of the non-standard design domestic blocks is similar to NCB

(2) There is a bathroom in 3B flat master bedroom

Basis of the Budget :

(1) Project information included in the following documents:
- Revised programme received from APM/P6 on 15/11/00
- Preliminary drawings and CFA calculation received from SA/18's team on 14/11/00
- Building Services Cost Estimation received from PBSE/C46 on 13/11/00
- Preliminary foundation design received from Wong & Ouyang on 8/11/00 & 14/11/00
- Structural framing design received from Wong & Ouyang on 28/10/00
- finishing schedule received from SA/18 on 14/8/00
- Wind tunnel test of $550,000 lss srequired as confirmed by the Structural Engineer

(2) - There is no retail shops on this project as confirmed by A/4 .

Prepared by : Michael W.K.Ching D.G. Jones & Partners (HK) Ltd.

Date : 16 December 2000

PART II OF ANNEX

PHASE 2

Construction Cost Budget No. 4 (Domestic Blocks: HOS Portion)

Project : Redevelopment of Hung Hom Estate Phase 2 (PHDP Code:)

Cost at June 00 Price Level	No. of Flats	Estimated Cost: Site Form. & Foundation (Incl. caps)	Estimated Cost: Building (Excl. Caps)	TOTAL
1.0 Standard Blocks *(N/A as all non-standard blocks)*				
Cost per Flat x Flat No. = Sub-Total (A) (Total CFA = _____ m2)				($ /m2 CFA) ($ per flat)
2.0 Adjustments to Item 1.0 Above				
Cost per Flat x Flat No. = Sub-Total (B) (Total CFA = _____ m2)				($ /m2 CFA) ($ per flat)
3.0 Non-standard Domestic Blocks (a) 3 No. Non-standard Domestic Blocks Average CFA per Flat 2B Flat 62.52 m2 3B Flat 86.80 m2	588 588 1,176	61,682	454,004	515,686
		$,000.00		
Cost per Flat x Flat No. = Sub-Total (C) (Total CFA = 87,815 m2)		61,682	454,004	515,686 ($5,872/m2 CFA) ($438,509 per Flat)
		$,000.00		
4.0 Adjustments to Item 3.0 Above (a) Adjust for extra costs due to construction of blocks on podium (b) Add costs for Room Coolers provided to all domestic flats (c) Add costs for 6mm well gasketted windows to all domestic flats (d) Add cost for wind tunnel test		- - - -	23,662 16,415 2,823 550	23,662 16,415 2,823 550
Sub-Total (D)		0	43,450	43,450 ($495/m2 CFA) ($36,947 per Flat)
		$,000.00		
5.0 Development Contingency (a) All standard blocks superstructure only (b) All non-standard blocks and all standard block elements other than superstructure		- 3,084	- 24,873	- 27,957
Sub-Total (E)		3,084	24,873	27,957
Total Cost of Domestic Block - Home Ownership Scheme Portion at June 00 Price Level = (A) + (B) + (C) + (D) + (E) (Including Provisions for Contract Fluctuations)		64,766	522,327	587,093 ($6,686/m2 CFA) ($499,229 per Flat)

Construction Cost Budget No. 4 (Unallocable Portion)

Project : Redevelopment of Hung Hom Estate **Phase** 2 **(PHDP Code:**)

Cost at June 00 Price Level	CFA (m2)	Estimated Cost: Site Form & Foundation (Incl. caps)	Estimated Cost: Building (Excl. Caps)	TOTAL
		<----------$'000----------		
1.0 Ancillary Facilities in Domestic Block				
(a) Ancillary facilities (no fitting out included)	570	400	2,280	2,680
(b) Fitting Out for Ancillary/Welfare Facilities (Total area to be fitted out = 570 m2 GFA @ $2,740/m2 CFA)	570	-	1,562	1,562
2.0 Other Adjustments for Item 1.0 Above				
3.0 Development Contingency		20	192	212
Total Cost of Ancillary/Welfare Portion at June 00 Price Level = Total of Items in 1.0 to 3.0 (including Provisions for Contract Fluctuations)		420	4,034	4,454 ($7,814/m2 CFA)

Remarks

1. Unallocable Portion includes the following :

Estate Management Office	110	m2 CFA
Owner's Corporation Office	40	m2 CFA
Cleansing Contractors Office	20	m2 CFA
Artisan Workshop	30	m2 CFA
Refuse Collection Point	370	m2 CFA
Total	570	m2 CFA

2. There is no Welfare Facilities in this project as confirmed by the Architect.

Construction Cost Budget No. 4 (Carpark Portion)

Project : Redevelopment of Hung Hom Estate Phase 2 (PHDP Code:)

Cost at June 00 Price Level	Space (No.)	Estimated Cost: Site Form. & Foundation (Incl. caps)	Estimated Cost: Building (Excl. Caps)	TOTAL
1.0 Carpark in a freestanding Carpark Building				
(a) Carpark Portion — Area of which yardstick is based upon				
- Private (35 m2 CFA per space)	463	2,732	60,559	63,291
- Motorcycle (6 m2 CFA per space)	30	29	650	679
	493			
(b) Building Services				
- Private	463	-	7,633	7,633
- Motorcycle	30	-	82	82
		<-----$,000.00----->		
Sub-total (A) :- (including Provisions for Contract Fluctuations)		2,761	68,924	71,685
(Total CFA based on Actual Design 15,555 m2 & Average CFA per carparking spac 33.24 m2)				($4,608/m2 CFA) ($153,173 per space)
2.0 Development Contingency		138	3,446	3,584
Total Cost of Carpark Portion at June 00 Price Level = (A) + Item 2.0 (including Provisions for Contract Fluctuations)		2,899	72,370	75,269
				($4,839/m2 CFA) ($160,831 per space)
3.0 Difference between Actual Design (Item 1.0 above) and Cost Yardsticks due to the following :		<-----$,000.00----->		
(a) Adjust for shallow foundation		-3,309	-	-3,309
(b) Add cost for mechanical ventilation		-	422	422
(c) Add cost for congested site construction		-	5,987	5,987
(d) Extra cost for sceen wall and waterproofing		-	4,306	4,306
(e) Extra cost for extra external walls		-	1,000	1,000

Remark:

1. 30 No. of motorcycle carpark is counted as 5 No. private carpark

Construction Cost Budget No. 4

(Transfer Structures - Commonly Shared Across Phases of the Development and Amongst Various HA Businesses)

Project : Redevelopment of Hung Hom Estate **PHASE** 2 (PHDP Code:)

Cost at June 00 Price Level	Estimated Cost		TOTAL
	Building	Others	
	<-------- $,000.00 -------->		
1.0 Transfer Plate based on Actual Design (a) Transfer structure for domestic blocks	16,902	-	16,902
Sub-Total (A)	16,902	-	16,902
	<-------- $,000.00 -------->		
2.0 Development Contingency	845	-	845
Sub-Total (B)	845	-	845
	<-------- $,000.00 -------->		
Total Cost of Commonly Shared Transfer Structures at June 00 Price Level = (A) +(B) (including Provisions for Contract Fluctuations)	17,747	0	17,747

Construction Cost Budget No. 4 (External Works - Commonly Shared Across Phases o PHASE 2
Development and Amongst Various HA Busiesses)

Project : Redevelopment of Hung Hom Estate Phase 2 (PHDP Code: ____)

Total GEA = 13,920 m2; Total CFA= 103,940 m2; Total LAA = ____ m2

Cost at June 00 Price Level	Estimated Cost: Foundation (Incl. Caps)	Estimated Cost: Building (Excl. Caps)	TOTAL
	<-- $,000.00 -->		
1.0 External Works based Cost Yardsticks (excl. Contract Price Fluctuation)			
(a) Hard Landscape Works (Amenities)	-	22,021	22,021
(b) Underground Drainage	-	10,245	10,245
Sub-total (A)	0	32,266	32,266 ($310/m2 CFA) ($2,318 /m2 GEA)
	<-- $,000.00 -->		
2.0 Special External Works based on Actual Design (incl. Contract Price Fluctuation)			
(a) Suspended podium structure	2,996	6,900	9,896
(b) Allow cost for special features at entrances	-	1,000	1,000
(c) Allow cost for road widening works at Tai Wan Road	-	1,000	1,000
Sub-total (B)	2,996	8,900	11,896 ($114/m2 CFA) ($855 /m2 GEA)
	<-- $,000.00 -->		
3.0 Development Contingency	150	2,058	2,208
Sub-Total (C)	150	2,058	2,208 ($21/m2 CFA) ($159 /m2 GEA)
Total Cost of Commonly Shared External Works at June 00 Price Level = (A) + (B) + (C) (including Provisions for Contract Fluctuations)	3,146	43,224	46,370 ($446/m2 CFA) ($3,331 /m2 GEA)

	<-- $,000.00 -->		
4.0 Cost of Automated Refuse Collection System at June 00 Price Level			
5.0 Development Contingency			
Total Cost of Automated Refuse Collection System at June 00 Price Level = Total of Items 4.0 to 5.0 (including provisions for Contract Fluctuation)			($ /m2 CFA) ($ /m2 GEA)

Cost at June 00 Price Level	Estimated Cost: Soft Landscape	Estimated Cost: Fees & Others	TOTAL
	<-- $,000.00 -->		
6.0 Cost of Other Separate Contracts (incl. Softlandscaping Work) at June 00 Price Level	995	796	1,791
7.0 Development Contingency	50	40	90
Cost of Other Separate Contracts (incl. Softlandscaping Work) at June 00 Price Level = Total of Items 6.0 to 7.0 (including Provisions for Contract Fluctuations)	1,045	836	1,881 ($18/m2 CFA) ($135 /m2 GEA)

Site Development Cost Budget No. 4 (Demolition)

PHASE 2

Project : Redevelopment of Hung Hom Estate Phase 2 (PHDP Code: _____)

Cost at June 00 Price Level	Estimated Cost (in $,000) Demolition	Others	TOTAL
	<-----$,000.00----->		
1.0 Estimated Cost for Demolition			
(a) Demolition of 2 No. H-Blocks (based on awarded Contract Sum)	5,583	-	5,583
Total Cost of Demolition Works Sub-Total (A)	5,583	-	5,583
	<-----$,000.00----->		
2.0 Development Contingency	279	-	279
Sub-Total (B)	279	-	279
	<-----$,000.00----->		
Total Cost of Demolition Works at June 00 Price Level = (A) + (B) (including provisions for Contract Fluctuations)	5,862	-	5,862

Remarks:

1. The awarded contract sm for demolition and site formation works is $24,679,637 and out of which only $5,582,534 is HA funded.