



THE HONG KONG HOUSING AUTHORITY

Memorandum for the Building Committee

Proposed Master Layout Plan and Project Development Budget for the Redevelopment of Tung Tau Estate Phase 9

PURPOSE

To seek Members' approval to the Proposed Master Layout Plan and Project Development Budget for the Redevelopment of Tung Tau Estate Phase 9.

BACKGROUND

2. The development site is located at Wong Tai Sin. The site is bounded by Lok Sin Road to the north-west, Kai Tak Nullah to the north-east, Shek Ku Lung Road Playground to the south and Lee Kau Yau Memorial School to the south-east. Location Plan is shown in **Part 1A** of the **Annex**.

3. Tung Tau Estate Phase 9 (Block 23) was the last phase of public housing redevelopment in Kowloon Central under the Comprehensive Redevelopment Programme. The rehousing of tenants to Upper Wong Tai Sin Estate Phase 4 had been completed in September 2001. Compared with the previous HOUSCOM's Control List, the current proposed flat production for Tung Tau Estate Phase 9 has increased by 156 flats to a total of 1,836 flats.

4. Tung Tau Estate Phase 9 is earmarked for PRH development to meet the demand from PRH applicants as well as the potential redevelopment of old PRH estates in Wong Tai Sin district.

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

Date	Events
(a) 23 March 2001	PDRC endorsed the Development Parameters, Conceptual Layout, Cost Estimate and Financial Assessment for the Proposed Redevelopment of Tung Tau Estate Phase 9 for submission to the Strategic Planning Committee (SPC) (PDRC Paper No. 7/01)
(b) 14 June 2001	SPC approved the inclusion of Tung Tau Estate Phase 9 into the PHDP and endorsed its respective development cost ceilings (Paper No. SPC 26/2001)
(c) 23 October 2001	Wong Tai Sin District Council was briefed on the proposed scheme design and development parameters for Tung Tau Estate Phase 9.
(d) 19 November 2001	Kowloon District Planning Conference (KDPC) approved the development parameters for Tung Tau Estate Phase 9 (KDPC Paper No. 6/2001)
(e) 25 January 2002	PDRC endorsed the Proposed Master Layout Plan and Project Development Budget for the Proposed Redevelopment of Tung Tau Estate Phase 9 for submission to Building Committee. (PDRC Paper No. 01/2002)
(f) 12 March 2002	Wong Tai Sin District Council was briefed on the revised scheme design and development parameters for Tung Tau Estate Phase 9.

MASTER LAYOUT PLAN

6. The Proposed Master Layout Plan of Tung Tau Estate Phase 9, follows generally the approved Development Parameters with non-standard site specific approach as approved by SPC via Paper No. SPC 26/2001. It comprises-

- (a) Two 45-residential storeyed non-standard PRH Blocks;
- (b) One 2-storeyed podium carpark;

- (c) One 3-storeyed Residential Care Home for the Elderly (RCHE); and
- (d) Associated external work and landscape work at podium roof.

7. This Project will provide a total of 1,836 flats for Year 2006/07 with a total car parking provision for 76 private cars, eight motor-cycles and 13 Light Good Vehicles (LGV).

8. A reduction of 382 private car parks is made as compared with the approved Development Parameters and Conceptual Layout in SPC submission. This reduction is resulted from the Second Parking Demand Study whereby the prevailing private car parking statutory requirement of 1 parking space per 4 flats for residential development over plot ratio 6.0 would be relaxed.

9. The major Development Parameters are summarized as follows (For details, refer to **Part I B & C** of the **Annex**) -

Table 1: Summary of Development Parameters

	Housing Type	No. of Flats	Design Population	Gross Site Area	Domestic GFA	Plot Ratio
Phase 9	Group 1	1,836	5,100	11,189 m ²	82,024 m ²	7.33

10. The Master Layout Plan drawings are attached in **Part II** of the **Annex**. The main features of the overall development are as follows -

PLANNING CONTEXT

- (a) The vehicular access points are at the end of Tung Lei Road where private car entrance is separated from that of LGV. This allows more effective management between the two different groups of carpark users.
- (b) Emergency Vehicular Access (EVA) is integrated into the forecourt landscape fronting Lok Sin Road.

(c) Traffic noise impact -

- (i) The subject site is subjected to considerable traffic noise from Lok Sin Road and Prince Edward Road East. Given the size of the site and its proximity to the noise source, it would be difficult to mitigate against such noise to fully comply with the standard of 70dB(A) stipulated in the HKPSG.
- (ii) Despite the building locations, orientation, carpark podium and set back façade to provide noise mitigation, the principal facades facing towards Prince Edward Road East and Lok Sin Road still experience noise intrusion problem. There are a total of 920 flats out of 1,836 flats exceeding the stipulated standard of 70dB(A), which represents 50.1% of the entire development. The highest noise level is estimated to be 76dB(A).
- (iii) Since the site area (about 1.2 ha) is below 2 ha, therefore, according to EPD Practice Note ProPECC PN1/97, no minimum road traffic noise exposure compliance rate is required. However, it is still encouraged to consider and incorporate noise mitigation measure whenever practicable.
- (iv) Various noise mitigation measures have been tested for effectiveness, including the use of 5m high noise barriers along both Prince Edward Road East and Lok Sin Road. The improvement on noise compliance rate is less than 1%. It is considered ineffective and not worth pursuing. Further study shows that if the existing podium were to extend to the site boundary facing Lok Sin Road, only 2% improvement would be achieved on the noise compliance rate.
- (v) To reduce the traffic noise impact, all facades with noise levels exceeding 70dB(A) criterion are recommended to be provided with well-gasketed windows with a minimum of 6mm panel together with air-conditioning subject to housing policy as a last resort.

(d) Visual impact-

The two 45-storey domestic towers on podium are proposed to maximize the site potential according to the development parameters approved by Kowloon District Planning Conference on 19 November 2001. Their disposition, however, lies on the “sight line” towards the Lion Rock from the Metro Park in the SE Kowloon Development and the degree of obstruction depends on the “vantage point” one takes along the axis. Despite its height, the view will not be obstructed by the proposed development when viewed from the Metro Park.

BUILDING DESIGN

- (e) The tower blocks and carpark podium are set back from Lok Sin Road to create a wider visual corridor along the road, with a larger open space/forecourt for recreation purpose.
- (f) Vehicular and service zones are tucked away at the rear side of the podium to allow a “pedestrian zone” of better comfort and safety fronting Lok Sin Road.
- (g) The set back of domestic blocks from Lok Sin Road also enhances noise mitigation. Orientation of the domestic blocks is set to maximize open view with minimal overlooking between blocks.
- (h) Designated service corridors are provided at G/F to facilitate refuse collection and loading/unloading operations.
- (i) Podium is set back from the Tung Lei Road with specific aim to provide an extended landscape zone and to preserve the existing trees just outside the site boundary.
- (j) The RCHE’s entrance is located at the north-eastern corner of the site for prominent and convenient access from Lok Sin Road. The sitting of the RCHE also enjoys full frontage of the open area to the north-east parallel to the existing nullah.
- (k) Site specific non-standard block design is adopted to achieve the following design objective-
 - (i) The non-standard flat modules are derived mainly from the “Standard New Harmony” flat modules, with modified kitchen and bathroom layout to improve cloth drying and fume exhausting arrangement.
 - (ii) Bay windows are incorporated in the smaller bedroom of 1B, 2B and 3B flats and also the living/bedroom area of all 1P/2P and 2P/3P flats to enhance the spatial quality of these small area/flats.
 - (iii) Architectural feature and fins at roof and gable end walls to provide character for the development.

- (iv) Precast facade construction for non-standard flat modules to enhance buildability.
- (v) Enhance lighting and natural ventilation at typical floor corridor for better comfort.

LANDSCAPE DESIGN

- (l) The main objective of the landscape design is to establish a coherent and robust framework for maximizing the landscape design potential within the site, with particular focus on elderly facilities. Landscape design will be developed at the ground floor area and on the podium roof level.
- (m) It is proposed that the main concept of landscape design is to build on the existing culture and local characteristics of Tung Tau Estate, expressed in modern design context and language. Due to the high population of elderly in the vicinity, provision of elderly facilities is highly emphasized in the landscape design.
- (n) The open space arrangement and landscape features of the ground floor area are as follows-
 - (i) Within the limited site configuration, the landscape design is focused on the frontage of the development along Lok Sin Road and Tung Lei Road. A series of different character pocket open spaces is proposed, which is connected by the soft-landscaped pedestrian passage (to integrate with part of the E.V.A.). This serves to re-provide the sitting-out areas for small groups of people to gather, chat and to play chess in the old days.
 - (ii) Recycled landscape furniture is provided within these small open spaces. Facilities for the elderly include sitting-out areas with pavilions and small garden with rockscape and shaded sitting.

PROJECT DEVELOPMENT BUDGET

11. The proposed Project Development Budget for the development is estimated to be HK\$722.851M for Tung Tau Estate Phase 9. A breakdown of the proposed Development Budget is given in **Part IV** of the **Annex** and the key elements are summarized in **Table 2**.

Table 2: Project Development Budget

Cost Heads		Works Elements	Total \$M
(a)	Site Development Cost	Site Formation	-
		Demolition	11.236
		Sub-total	11.236
(b)	Construction Cost	Foundation	100.627
		Building	500.043
		Soft Landscape & Others	1.668
		Sub-total	602.338
(c)	Other Project Cost [2% on (a) and (b)]	Civil engineering and geotechnical studies, site investigation, material testing	12.271
(d)	Total Site Development and Construction Cost [(a) + (b) + (c)]		625.845
(e)	Project Management Cost [15.5% of (d)]	Professional services and overheads, consultation fee and consultant site staff etc.	97.006
(f)	Project Development Budget [(d) + (e)]		722.851

Note: Construction Cost of RCHE is not included.

12. The Construction Cost (including foundation and superstructure) of the 100-place RCHE is \$14.958M. Social Welfare Department has indicated their intention to wholly fund the development of RCHE by Lotteries Fund.

PROJECT DEVELOPMENT COST

13. The proposed Project Development Cost of Tung Tau Estate Phase 9 based on the Master Layout Plan as compared with the Approved Project Development Cost Ceiling is indicated in **Table 3**.

Table 3: Combined Cost Apportionment

	(a)	(b)	(c)	(d1)	(d2)
Buildings/ Portion	Proposed Project Development Cost (\$/m ² CFA)	Approved Project Development Cost Ceiling (Paper No. SPC 26/2001) (\$/m ² CFA)	Proposed Unit Construction Cost adjusted to tender-in date (Note 1) (\$/m ² CFA)	June 2001 Construction Cost Yardstick for Group 1 (Note 2) (\$/m ² CFA)	June 2001 Construction Cost Yardstick for Group 1 adjusted to tender-in date (Note 2) (\$/m ² CFA)
PRH (non-std)	7,241	7,246	5,753	5,024	5,011
Private Car Parking	6,118	6,594	4,800	4,779	4,767
LGV Parking	6,685	7,194	5,280	5,260	5,247
Welfare	7,100	5,429	5,746	-	-

Note -

1. For comparing with the Construction Cost Yardstick, external works, soft landscaping and other sundry costs such as drainage, utility connections, other project costs and project management costs, etc. have been excluded from the Unit Construction Cost. However, the costs of piling, substructure, superstructure, including fluctuation and transfer plate have been included in the Construction Cost. The Construction Cost has been adjusted to the price level at the time of tender.

2. Cost Yardstick for Group 1 Non-standard Design project based on New Harmony 1 (Option 6) with transfer-plate on podium, inclusive of 5% development contingency. Same provision being allowed for in the cost yardstick for both private carpark and LGV parking under podium of domestic building.

14. The proposed Project Development Cost of PRH, private carpark and LGV parking are all within the Project Development Cost Ceiling as approved by the Strategic Planning Committee. (Paper No. SPC 26/2001 refers.)

15. With reference to Table 3, the proposed unit construction cost for the PRH is 14.81% over the Construction Cost Yardstick of Group 1 for non-standard domestic (based on New Harmony 1(Option 6)) for the reasons as follows -

(a) PRH Cost:	% over Yardstick
(i) High cost in deep foundation based on project specific site condition and recent tender prices for H-piles of Engineer's design.	11.74%
(ii) Provision of refugee floor and higher structural cost due to building height over 40 domestic storeys.	1.86%
(iii) Miscellaneous (such as provision of air-conditioning etc.).	1.21%
(Total)	<u>14.81%</u>

16. With reference to Table 3, the proposed Unit Construction Cost for the private carpark and LGV parking is 0.69% and 0.63% respectively over the June 2001 Cost Yardstick adjusted to tender-in date.

AVAILABILITY OF FUNDS

17. Based on the Proposed Project Development Budget, the estimated yearly expenditure for the project is shown below and would be included in the next capital budget updating of the Authority - Table 4: Estimated Expenditure

	2001/02	2002/03	2003/04	2004/05	2005/06	Post 2006	Total
Capital Budget (updated on 4/3/2002)	8.016	71.275	82.181	143.230	225.181	133.379	663.262
Estimated Expenditure	11.130	0.500	98.614	82.554	201.299	231.748	625.845

DEVELOPMENT PROGRAMME

18. The key dates for the development programme are as follows -

(a) Master Layout Plan	PDRC(2)	01/02
(b) Master Layout Plan	BC	04/02
(c) Detailed Design	DDRP	09/02
(d) Demolition	Tender Out	07/01
	Commencement	10/01
	Completion	05/02
(e) Piling	Tender Out	11/02
	Commencement	03/03
	Completion	03/04
(f) Building	Tender Out	10/03
	Commencement	03/04
	Completion	03/07

RECOMMENDATION

19. It is recommended that the Proposed Master Layout Plan and Project Development Budget of \$722.851M for the Redevelopment at Tung Tau Estate Phase 9 as described above and in the Annexes to this paper be approved.

DISCUSSION

20. At the next meeting of the Building Committee to be held on 25 April 2002, members will be invited to approve the recommendation in Paragraph 19 above.

---0---0---0---

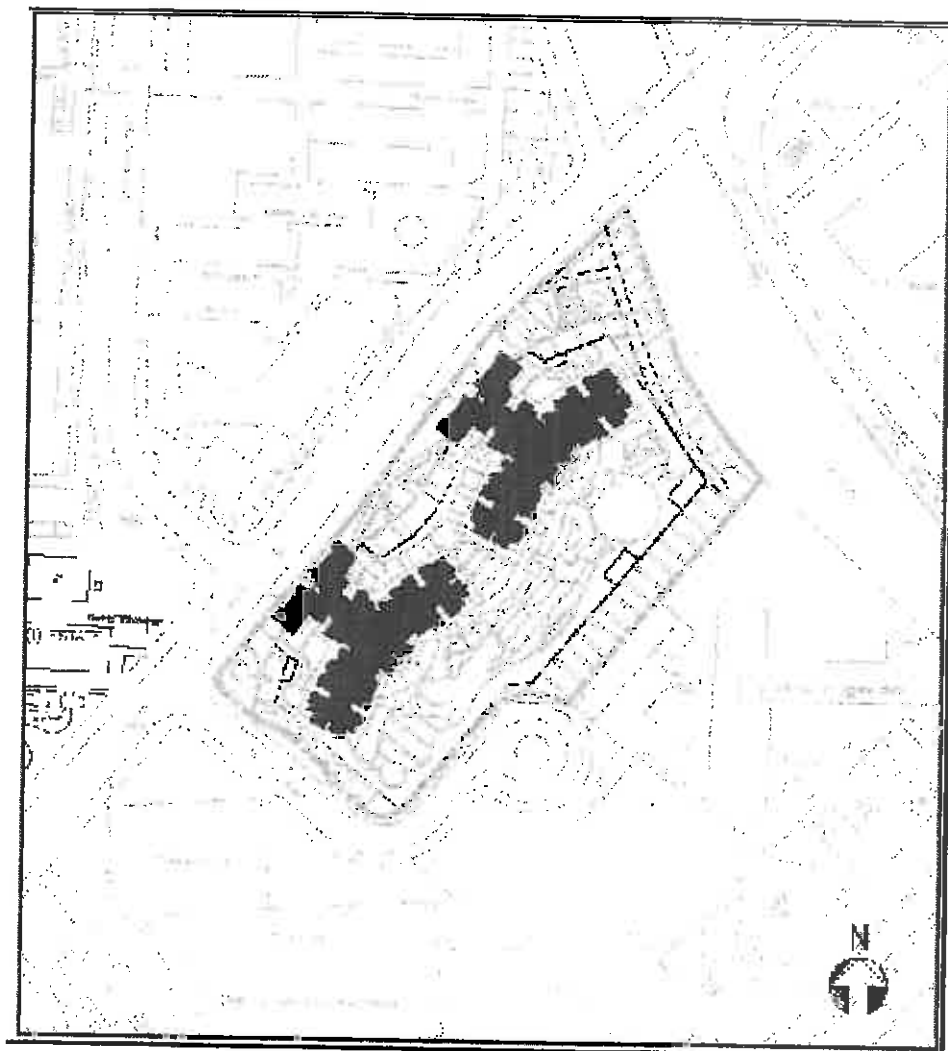
File Ref. : HD(AR) 55/767/9

Date : 22 April 2002

ANNEX

**Proposed Redevelopment of
Tung Tau Estate Phase 9**

**PROPOSED MASTER LAYOUT PLAN AND PROJECT
DEVELOPMENT BUDGET**



Issue No.1

**BC SUBMISSION
APRIL 2002**

**DEVELOPMENT AND CONSTRUCTION BRANCH
HOUSING DEPARTMENT**

CONTENT

Part I :

A. Location Plan

B. Evaluation of Master layout Plan

- 2.1 The Site**
 - 2.1.1 Site Location**
 - 2.1.2 Adjacent Land Uses**
- 2.2 Environmental Mitigation**
- 2.3 Site Formation**
- 2.4 Zoning Consideration**
- 2.5 Infrastructure**
 - 2.5.1 Drainage and Sewerage**
 - 2.5.2 Water Supply**
 - 2.5.3 Electricity, Telephone, Gas**
 - 2.5.4 Traffic Improvement**

C. Accommodation and Facilities

- 3.1 Site Area**
- 3.2 Plot Ratio**
- 3.3 Design Population**
- 3.4 Flat Number and Flat Mix**
- 3.5 Retail Provision**
- 3.6 Community and Welfare Facilities**
- 3.7 Parking Provision**
- 3.8 Management Accommodations**
- 3.9 Local Open Space**
- 3.10 Recreation Facilities**
- 3.11 Refuse Collection Facilities**

CONTENT

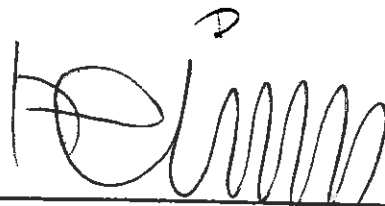
Part II : Master Layout Drawings

1. Master Layout Plan
2. Architectural Perspective & Landscape Drawings
3. General Layout Plans
4. Elevations & Sections
5. Typical Flat Layout Plans
6. Area and Efficiency Ratio

Part III : Development Programme

Part IV : Project Development Budget

**THIS DOCUMENT HAS BEEN REVIEWED
AND APPROVED FOR ADEQUACY**



SIGNED : Mr. C.W. KO (CA/1)

Date : 17 April 2002

Part I B – EVALUATION OF MASTER LAYOUT PLAN

Development Parameters	Master Layout Plan	Remarks
<p>2.1 <u>The Site</u></p> <p>2.1.1 <u>Site Location</u> Tung Tau Estate Phase 9 is located at Wong Tai Sin (Refer to location plan in Annex I).</p> <p>2.1.2 <u>Adjacent Land Use</u> The site is bounded by Lok Sin Road to the north-west, Kai Tak Nullah to the north-east, Shek Ku Lung Road Playground to the south and Lee Kau Yau Memorial School to the south-east.</p>	<p>As in the Development Parameters.</p> <p>As in the Development Parameters.</p>	
<p>2.2 <u>Environmental Mitigation</u></p> <p>2.2.1 Since the total site area is less than 2 ha, there is no minimum rate in the ProPECC note on traffic noise that has to be complied with.</p> <p>2.2.2 The building locations, orientations and podium provision have been considered during the design to mitigate the traffic noise impact from Prince Edward Road East (major district distributor) and Lok Sin Road on the residential flats.</p> <p>2.2.3 Given the close proximity of the site to Lok Sin Road, noise barriers are found to be ineffective and not provided. In this design layout, 50.1% of the dwelling flats are expected to experience traffic noise in excess of standard 70 dB(A). Among these flats, about 28% will experience noise level of 75 dB(A) and above while 1.5% will experience a maximum level of 76 dB(A).</p>		<p>Although there is no specified minimum noise compliance rate for site area less than 2 hectares, noise mitigation measures whenever practicable and acoustic insulation to any remaining affected residential units should be considered and provided. (Reference: Preliminary Report-Traffic Noise Assessment Study dated 04/02 prepared by MVA ASIA LIMITED.)</p>

Part I B – EVALUATION OF MASTER LAYOUT PLAN

Development Parameters		Master Layout Plan	Remarks
2.3	<u>Site Formation</u> No site formation works are required.	As in the Development Parameters.	
2.4	<u>Zoning Consideration</u> The site is zoned "Residential (Group A)" on the Outline Zoning Plan. No.S/K8/12.	As in the Development Parameters.	
2.5	<u>Infrastructure</u>		
2.5.1	<u>Drainage and Sewerage</u> No structure will be erected within the two proposed Drainage Reserve Areas and Water Works Reserve Area within Tung Tau Estate Phase 9. These mainly include the northern corner of the site, the strip of land along Kai Tak Nullah and the strip of land abutting the south-eastern site boundary line.	As in the Development Parameters.	
2.5.2	<u>Water Supply</u> Existing fresh/salt water supply are available.	As in the Development Parameters.	
2.5.3	<u>Utilities</u> Some diversions of utilities services may be required. Detailed advice on the new supply system should be sought from various utility companies at detailed design stage.	As in the Development Parameters.	

Part I C– ACCOMMODATION & FACILITIES

Approved by SPC (Paper No. SPC no. 26/2001)	Proposed Scheme	Remarks
3.1 <u>Site Area</u> Gross site area : 1.12 ha (approx.)	Gross site area : 1.12 ha (11,189m ²)	
3.2 <u>Plot Ratio</u> Gross Floor Area (Domestic) is 82,500 m ² . Domestic Plot Ratio is 7.5. (OZP: max. Plot Ratio = 7.5)	Gross Floor Area (Domestic) is 82,024.45 m ² . Domestic Plot Ratio is 7.33.	
3.3 <u>Design Population</u> The Total Design Population is 5,200.	The Total Design Population is 5,100 (approx.).	
3.4 <u>Flat Number and Flat Mix</u> The proposed housing development is planned to provide a total of 1,831 rental flats.	Provision of 1,836 rental flats in two 45 residential storeys site specific non-standard blocks. Actual Flat Mix Production: Flat 1/2P 2/3P 1B 2B 3B Total No. 624 176 578 406 52 1836 % 34.0 9.6 31.5 22.1 2.8 100	
3.5 <u>Retail Provision</u> Nil. To be served by the existing retail facilities in Tung Tau (II) Estate, San Po Kong and Kowloon City.	As in SPC Development Parameters.	
3.6 <u>Community/Welfare</u> Provision of a 100 bed-space Residential Care Home for the Elderly (RCHE).	As in SPC Development Parameters.	

Accommodation and Facilities

BC Submission – Tung Tau Estate Phase 9

Part I C– ACCOMMODATION & FACILITIES

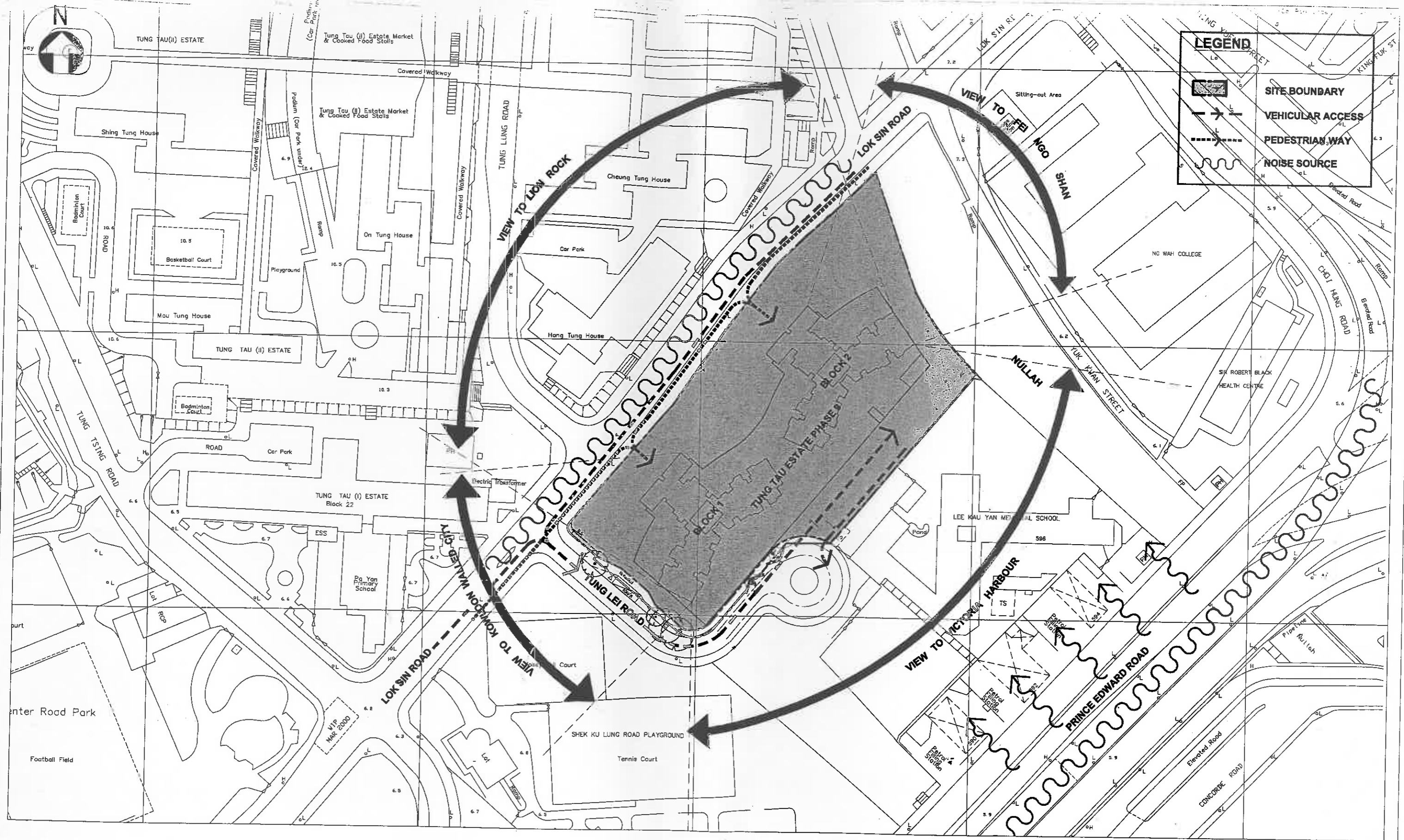
Approved by SPC (Paper No. SPC no. 26/2001)	Proposed Scheme	Remarks
<p>3.7 <u>Parking Provision</u></p> <p>3.7.1 <u>Carpark Spaces*</u> 450 nos. (1 space per 4 flats for plot ratio 6-7.5) (HKPSG: 1 private car parking space per 13-16 rental flats, size : 2.5m x 5m)</p> <p>3.7.2 <u>Motor-cycle Space</u> 23-45 nos. (10% of carpark spaces) (HKPSG: 5-10% of private car parking space for flats. Not less than 5 spaces will be provided at any location.)</p> <p>3.7.3 <u>Light Good Vehicle (LGV) Spaces*</u> 17 nos. (1 space per 80 rental flats) (HKPSG: 1 space per 80 rental flats, size: 3.5m x 7m)</p> <p>* Calculation exclude 1P/2P flats</p>	<p><u>Carpark Spaces*</u> 76 nos. (1 space per 16 flats)</p> <p><u>Motor-cycle Space</u> 8 nos. (10% of carpark spaces)</p> <p><u>Light Good Vehicle (LGV) Spaces*</u> 13 nos. (1 space per 100 rental flats)</p> <p>* Calculation exclude 1P/2P flats</p>	<p>Taken into account the existing car parking demand in nearby public housing estates.</p> <p>Pursuant to the Second Carparking Demand Study, parking provision of 1 space per 100 flats is adopted for LGV.</p>
<p>3.8 <u>Management Accommodation</u></p> <p>Refer to attached Appendix.</p>	<p>As in SPC Development Parameters.</p>	
<p>3.9 <u>Local Open Space</u></p> <p>5,365 m² provided (HKPSG: 10 ha. per 100,000 persons (min.) i.e. 1m² per person)</p>	<p>6,259 m² provided</p>	

Part I C– ACCOMMODATION & FACILITIES

3.10 Recreation Facilities Details not mentioned. (HKPSG: 400 m ² per 5000 persons. This provision will be included in open space calculation.)	Children Play Area of 410m ² will be provided in Tung Tau Estate Phase 9.	
3.11 Refuse Collection Facilities 1 no of Refuse Storage Area to be provided.	As in SPC Development Parameters.	

PART IA - LOCATION PLAN

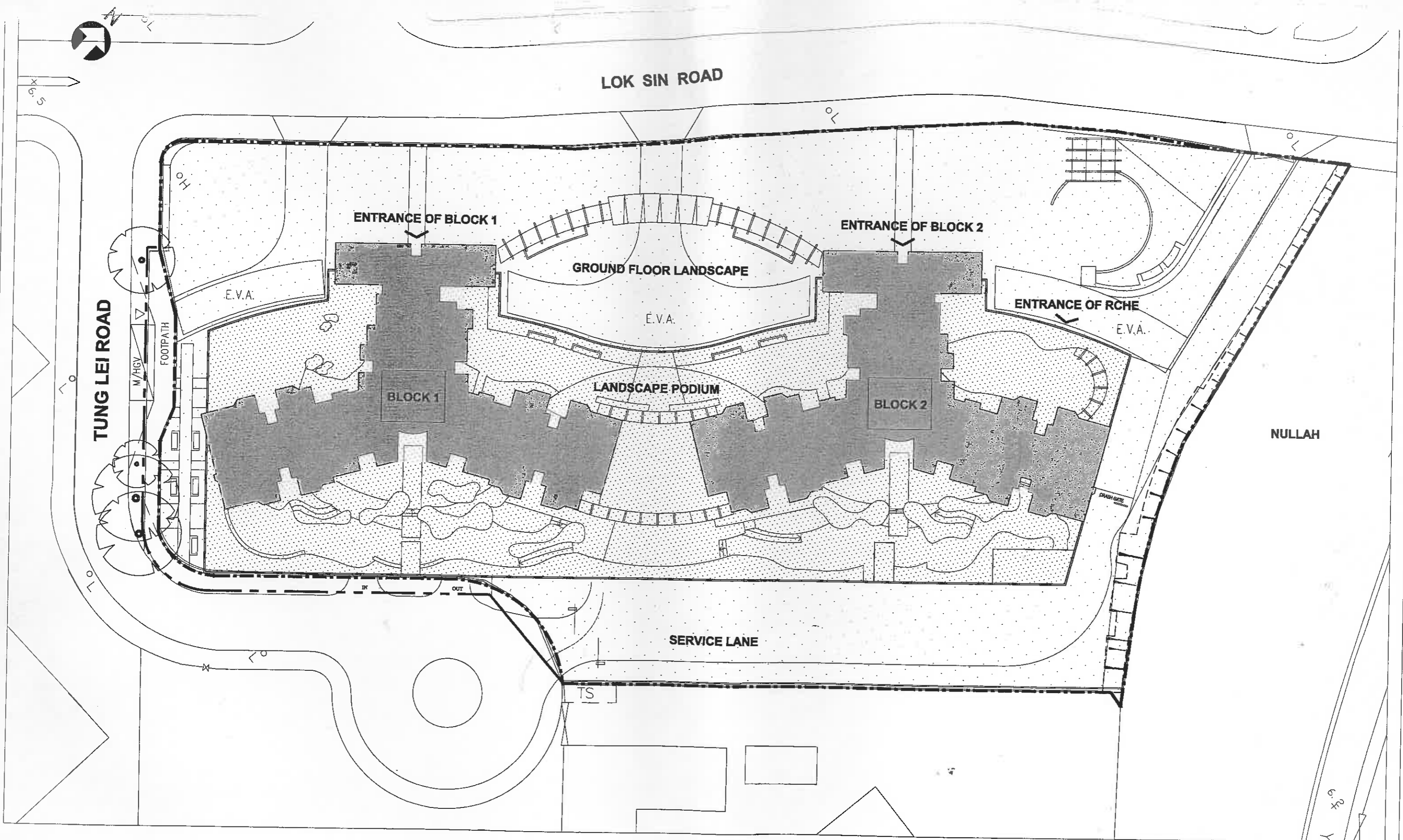
PROPOSED PUBLIC RENTAL HOUSING REDEVELOPMENT AT TUNG TAU ESTATE PHASE 9



LOCATION PLAN AND SITE STUDIES

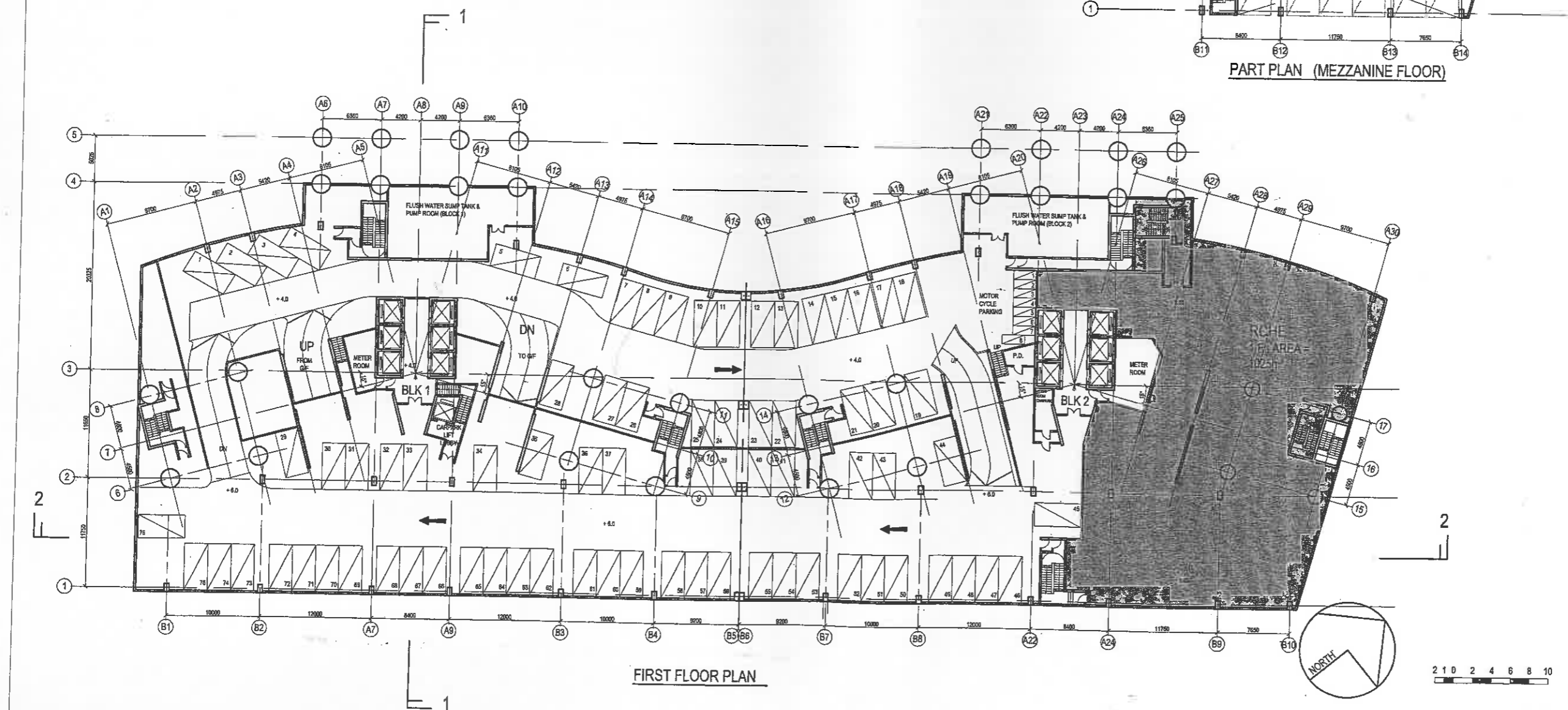
PART II - MASTER LAYOUT DRAWINGS

PROPOSED PUBLIC RENTAL HOUSING REDEVELOPMENT AT TUNG TAU ESTATE PHASE 9

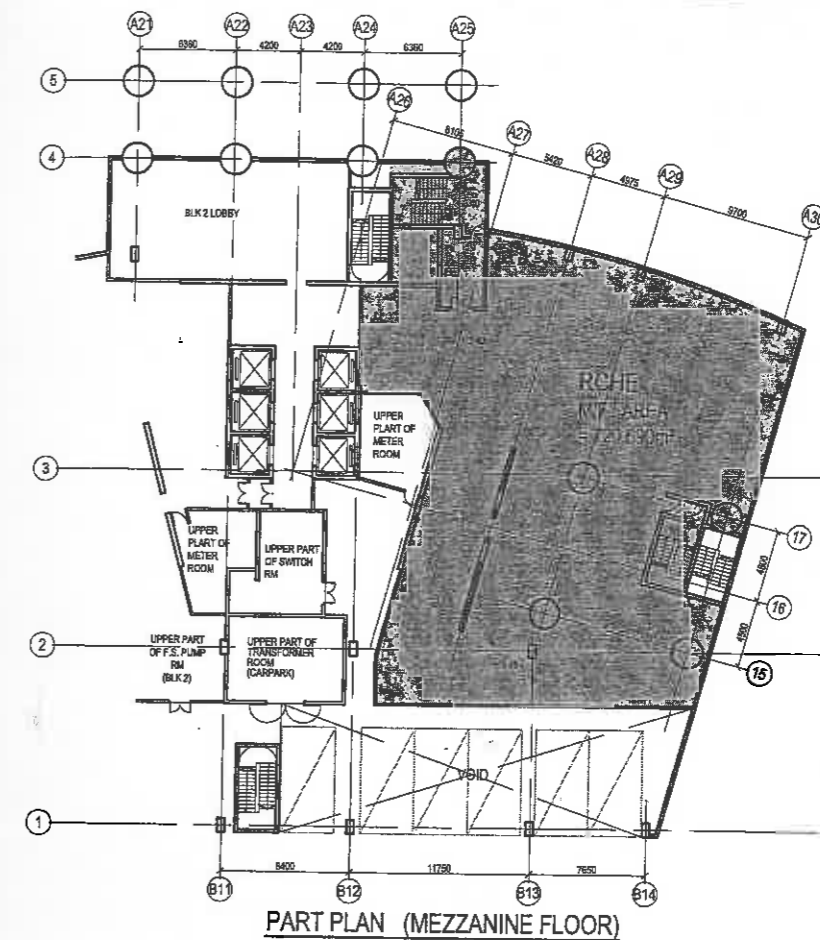


MASTER LAYOUT PLAN

SCALE 1:500



FIRST FLOOR PLAN



PART PLAN (MEZZANINE FLOOR)

NOTES

REVISIONS

NO.	DESCRIPTION AND DATE	DRW	CHK	AUTH
A	1. GENERAL REVISED. (22.03.02)			

NAME AND DESIGNATION	INITIAL	DATE
APPROVED C.K. KO CA/1	ORIGINAL SIGNED	18.01.02
ANN MARY TAM SA/27	ORIGINAL SIGNED	18.01.02
CHECKED BENJAMIN YIP A/118	ORIGINAL SIGNED	18.01.02
S.K. TANG TO/A/013	ORIGINAL SIGNED	18.01.02
DRAWN K.S. CHAN TO/A/013	ORIGINAL SIGNED	18.01.02

REDEVELOPMENT OF
TUNG TAU ESTATE
PHASE 9

CARPARK
FIRST FLOOR PLAN

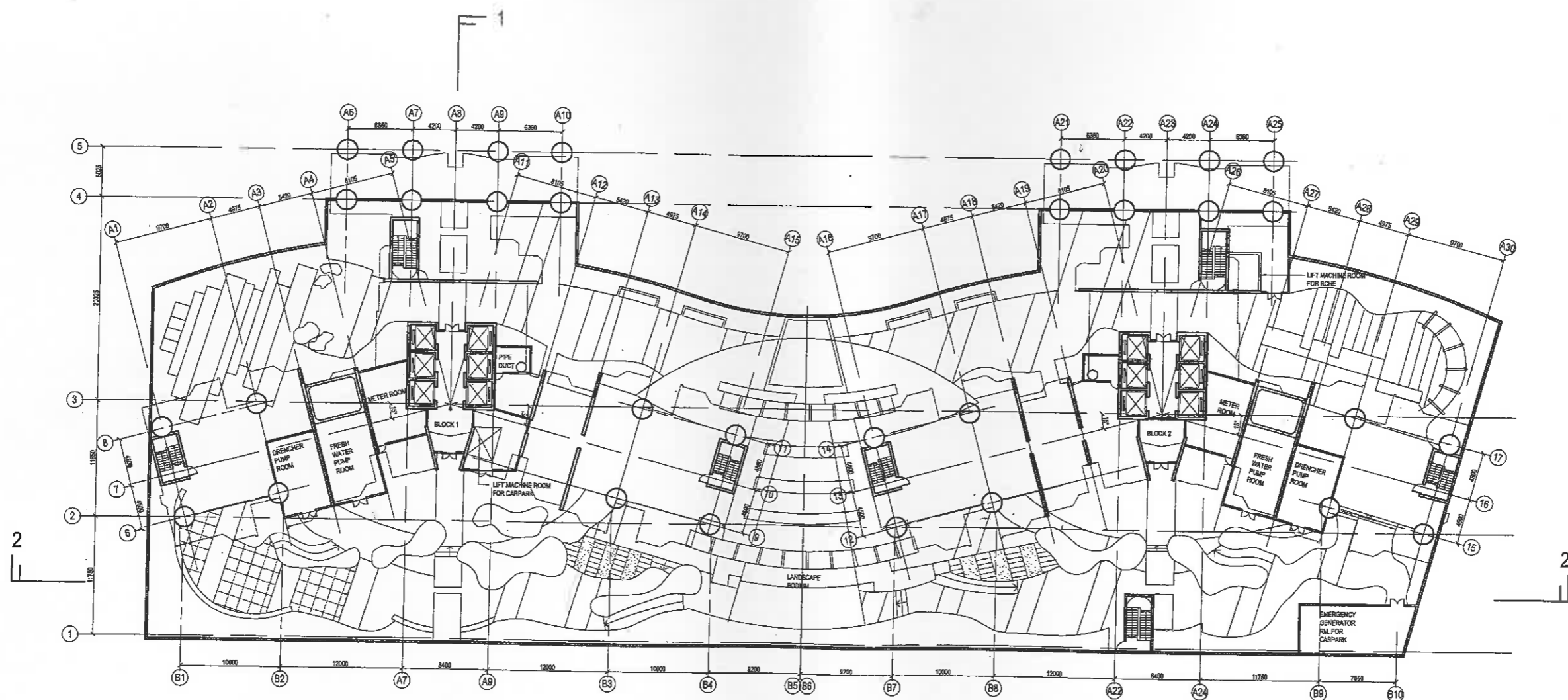
SCALE 1:500(A3) 1:200(B1)

DRAWING NO.
KL22/9/CP1A/PLO-02/A

SOURCE



HOUSING DEPARTMENT



PODIUM PLAN



2 10 2 4 6 8 10

NOTES

REVISIONS

NO.	DESCRIPTION AND DATE	INITIAL AND DESIGNATION
1.	GENERAL REVISED. (22.03.02)	DRN CKD AUTH

NAME AND DESIGNATION	INITIAL	DATE
AUTHORISED C.W. KO CA/1	ORIGINAL SIGNED	18.01.02
CHECKED ANN MARY TAM SA/27	ORIGINAL SIGNED	18.01.02
BENJAMIN YIP A/118	ORIGINAL SIGNED	18.01.02
S.K. TANG STO(A)35	ORIGINAL SIGNED	18.01.02
DRNIN K.S. CHAN TO(A)013	ORIGINAL SIGNED	18.01.02

PROJECT
REDEVELOPMENT OF
TUNG TAU ESTATE
PHASE 9

DRAWING TITLE
CARPARK
PODIUM PLAN

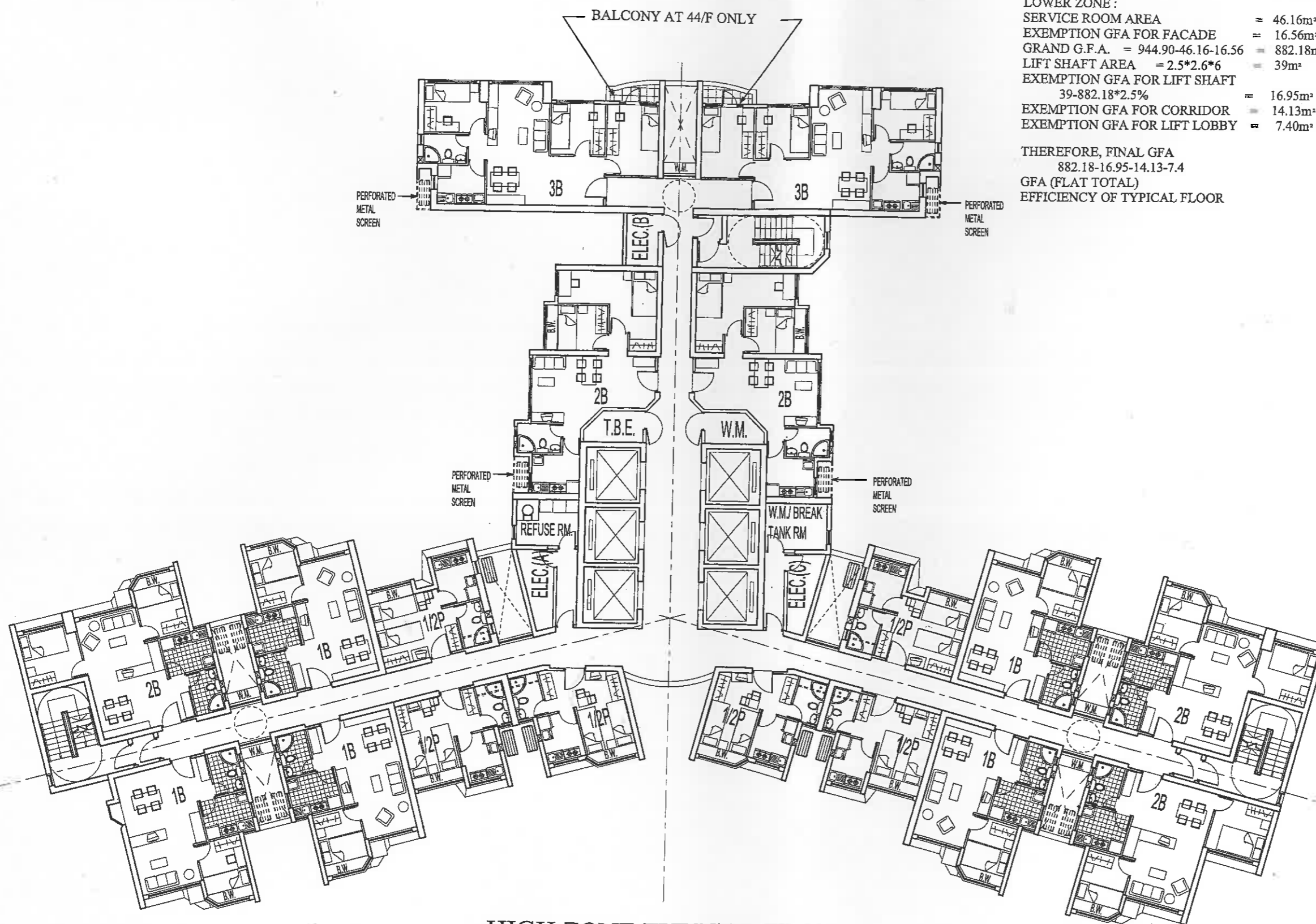
SCALE 1:500(A3) 1:200(B1)

DRAWING NO.
KL22/9/CP/A/PLO-03/A

SOURCE



HOUSING DEPARTMENT



HIGH ZONE TYPICAL PLAN
(44/F-45/F, 2 STOREYS)
18 FLATS PER FLOOR

C.F.A. = 944.90m²
 LOWER ZONE :
 SERVICE ROOM AREA = 46.16m²
 EXEMPTION GFA FOR FACADE = 16.56m²
 GRAND G.F.A. = 944.90-46.16-16.56 = 882.18m²
 LIFT SHAFT AREA = 2.5*2.6*6 = 39m²
 EXEMPTION GFA FOR LIFT SHAFT
 39-882.18*2.5% = 16.95m²
 EXEMPTION GFA FOR CORRIDOR = 14.13m²
 EXEMPTION GFA FOR LIFT LOBBY = 7.40m²

THEREFORE, FINAL GFA
 882.18-16.95-14.13-7.4
 GFA (FLAT TOTAL)
 EFFICIENCY OF TYPICAL FLOOR

= 843.70m²
 = 646.75m²
 = 76.66%

NOTES

1. BLOCK 1 SHOULD BE READ HANDED.

REVISIONS

NO DESCRIPTION AND DATE DWN CKD AUTH

	NAME AND DESIGNATION	INITIAL	DATE
AUTHORISED	C.W. KO CA/1	W.M.	18/10
CHECKED	ANN MARY TAM SA/27	AM	19/10
	BENJAMIN YIP A/118	BY	19/10
	S.K. TANG STO/A/35	ST	19/10
DRAWN	W.Y. FUN TOA/A/118	WF	19/10

PROJECT
 REDEVELOPMENT OF
 TUNG TAU ESTATE
 PHASE 9

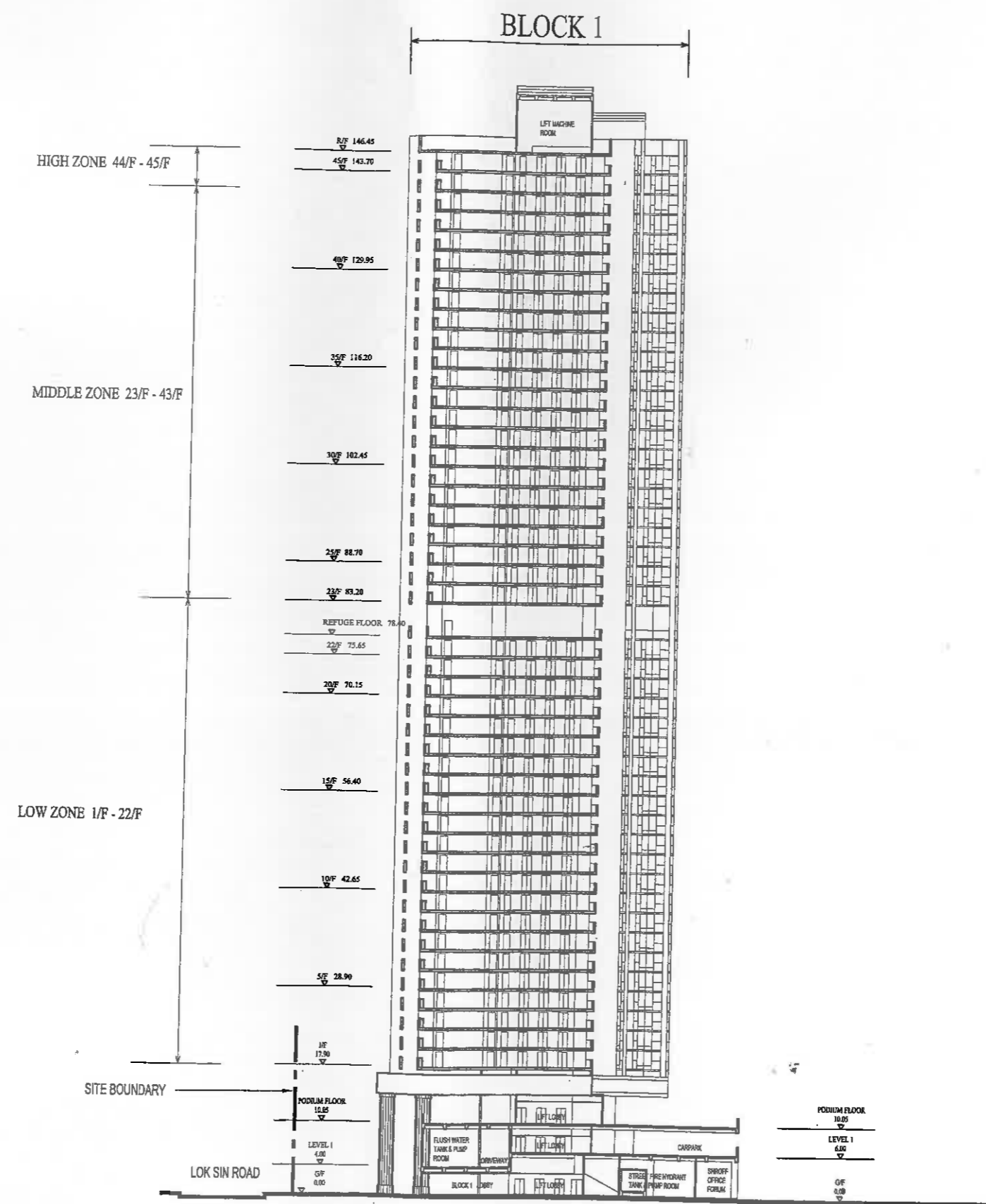
DRAWING TITLE
 BLOCK 1 & 2
 HIGH ZONE (44/F-45/F)
 TYPICAL FLOOR PLAN

SCALE 1:200

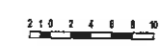
DRAWING NO.
 KL22/9/BLK/A/PLO-033

SOURCE





SECTION 1 - 1



NOTES

REVISIONS		INITIAL AND DESIGNATION	
NO	DESCRIPTION AND DATE	OWN	AUTH
A	1. GENERAL REVIEW.	(2.0.02)	11/11/02

NAME AND DESIGNATION	INITIAL	DATE
AUTHORISED		
C.K. KO CA/1	ORIGINAL SIGNED	11.01.02
ANN MARY TAM SA/27	ORIGINAL SIGNED	16.01.02
CHECKED		
BENJAMIN YIP A/118	ORIGINAL SIGNED	11.01.02
S.K. TANG ST/04/02	ORIGINAL SIGNED	11.01.02
DRAWN		
K.S. CHAN TO/01/03	ORIGINAL SIGNED	16.01.02

PROJECT	REDEVELOPMENT OF TUNG TAU ESTATE PHASE 9
DRAWING TITLE	SECTION 1 - 1
SCALE	1:750 (A3) 1:300 (B1)
DRAWING NO.	KL22/9/SITE/A/PLO-08/A
SOURCE	

	HOUSING DEPARTMENT
--	--------------------

BLOCK 1

BLOCK 2



SECTION 2 - 2

NOTES

REVISIONS		INITIAL AND DESIGNATION	
NO	DESCRIPTION AND DATE	CHK	AUTH
A	1. GENERAL REVISED. (11-04-02)	TOUWPO	STOUWPO
			AP18

	NAME AND DESIGNATION	INITIAL	DATE
AUTHORIZED	C.W. KO CAPI	ORIGINAL SIGNED	18.01.02
	ANN MARY TAM SAZT	ORIGINAL SIGNED	19.01.02
CHECKED	BENJAMIN YIP AY18	ORIGINAL SIGNED	19.01.02
	S.K. TANG STD(A)35	ORIGINAL SIGNED	18.01.02
DRAWN	K.S. CHAN TO(A)013	ORIGINAL SIGNED	18.01.02

PROJECT
REDEVELOPMENT OF
TUNG TAU ESTATE
PHASE 9

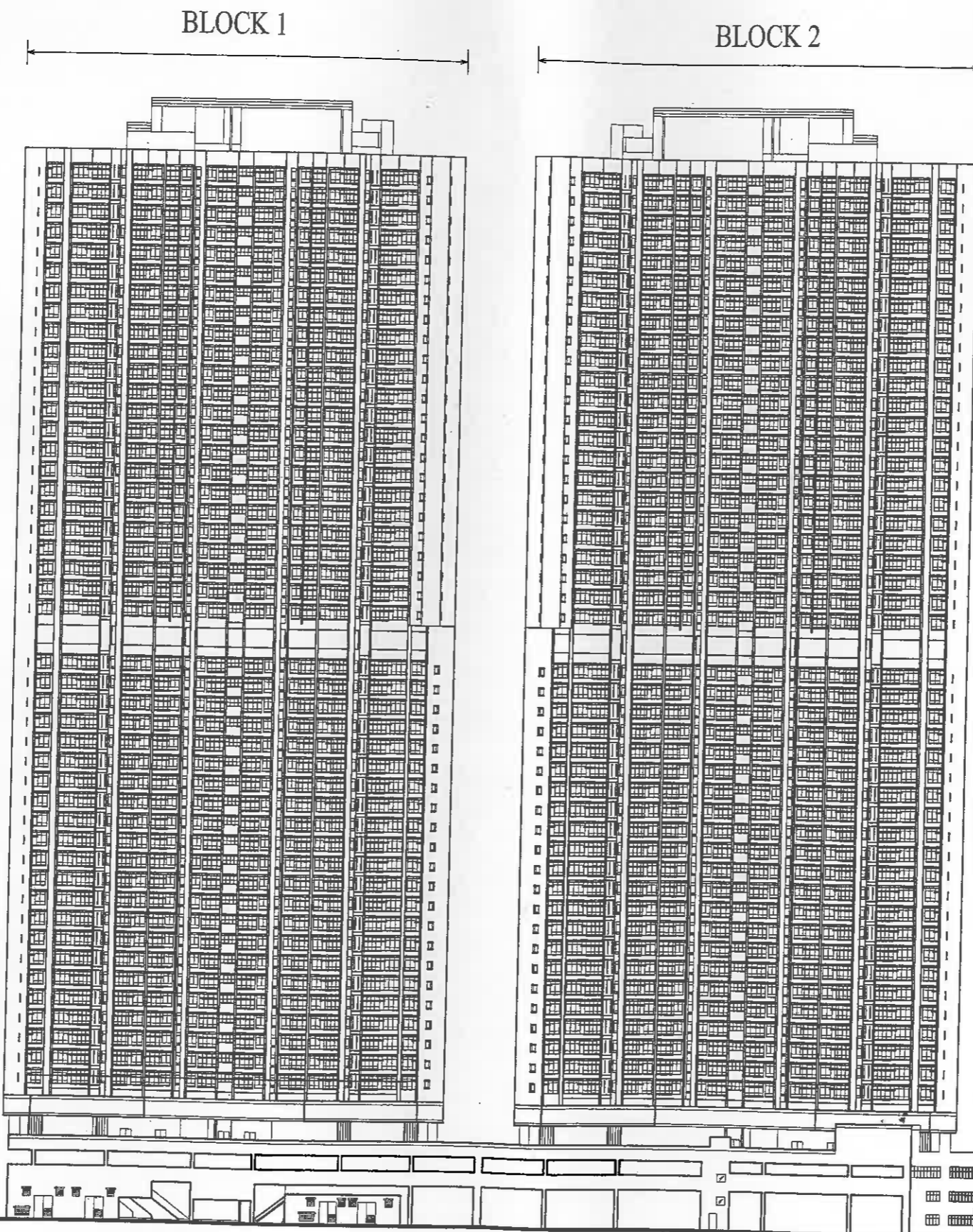
DRAWING TITLE
SECTION 2 - 2

SCALE 1:750(A3) 1:300(B1)

DRAWING NO.
KL22/9/SITE/A/PLO-09/A

SOURCE





NOTES

REVISIONS		INITIAL AND DESCRIPTION	
NO	DESCRIPTION AND DATE	OWN	AUTH
A	1. GENERAL REVISED. (11-04-02)	TOWNS	TOWNS

	NAME AND DESIGNATION	INITIAL	DATE
AUTHORISED	C.W. KO CAN	ORIGINAL SIGNED	18.01.02
CHECKED	ANN MARY TAM SA27	ORIGINAL SIGNED	18.01.02
	BENJAMIN YIP A/118	ORIGINAL SIGNED	18.01.02
	S.K. TANG STC(A)35	ORIGINAL SIGNED	18.01.02
DRAWN	K.S. CHAN TO(A)015	ORIGINAL SIGNED	18.01.02

PROJECT
REDEVELOPMENT OF TUNG TAU ESTATE PHASE 9

DRAWING TITLE
ELEVATION A

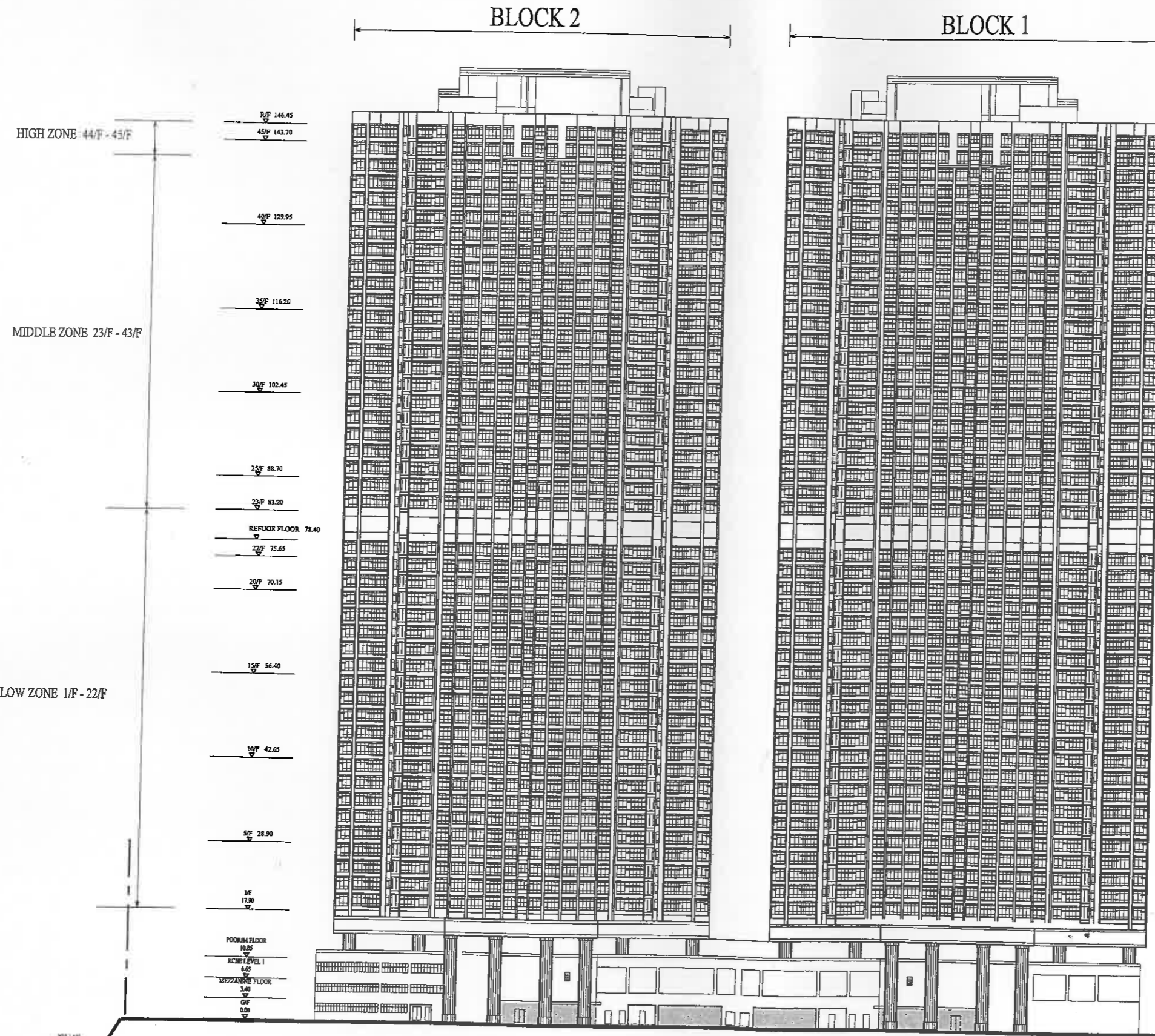
SCALE
1:750(A3) 1:300(B1)

DRAWING NO.
KL22/9/SITE/A/PLO-10/A

SOURCE

HOUSING DEPARTMENT

NOTES



REVISIONS		INITIAL AND DESIGNATION	
NO.	DESCRIPTION AND DATE	OWN	AUTH
A	1. GENERAL REVISED. (11-04-02)	TU0013	ST0005/01 A/118

	NAME AND DESIGNATION	INITIAL	DATE
AUTHORISED	C.W. KO C/A1	ORIGINAL SIGNED	18.01.02
	ANN MARY TAM SA27	ORIGINAL SIGNED	18.01.02
CHECKED	BENJAMIN YIP A/118	ORIGINAL SIGNED	18.01.02
	S.K. TANG STC(A)05	ORIGINAL SIGNED	18.01.02
DRAWN	K.S. CHAN TO(A)013	ORIGINAL SIGNED	18.01.02

PROJECT
REDEVELOPMENT OF TUNG TAU ESTATE PHASE 9

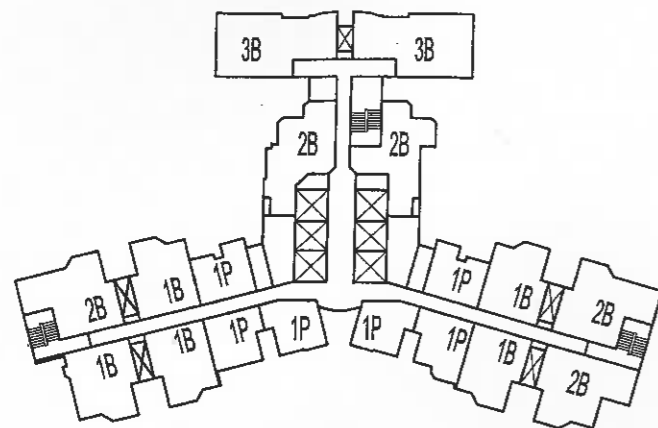
DRAWING TITLE
ELEVATION B

SCALE
1:750(A3) 1:300(B1)

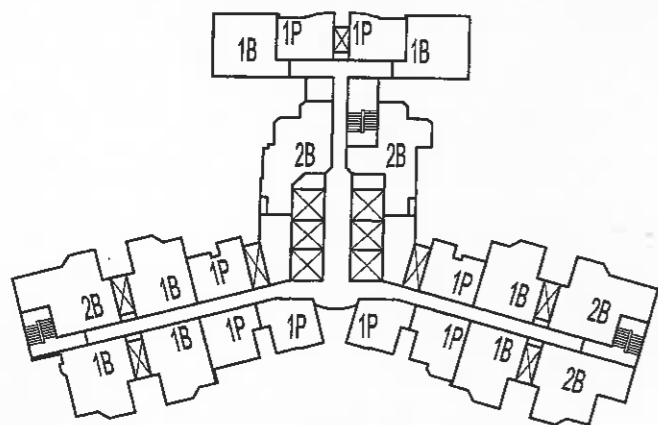
DRAWING NO.
KL22/9/SITE/A/PLO-11/A

SOURCE

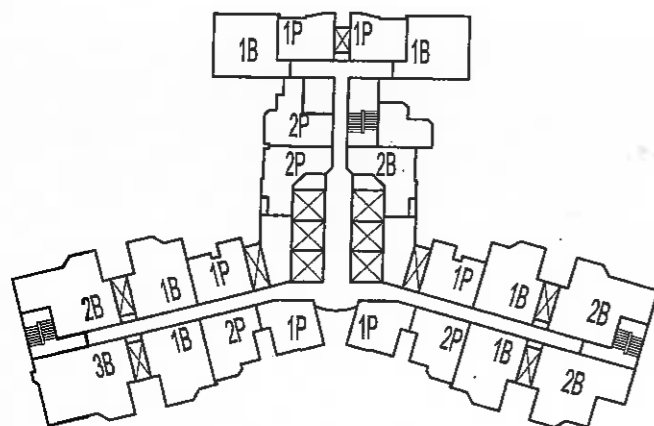
HOUSING DEPARTMENT



HIGH ZONE (44/F-45/F, 18 FLATS/FLOOR)



MIDDLE ZONE (23/F-43/F, 20 FLATS/FLOOR)



LOW ZONE (1/F-22/F, 21 FLATS/FLOOR)

Actual Flat Mix / Production :

	1/2 P	2/3 P	1B	2B	3B	Subtotal
T/F : LOWER ZONE (22 Storeys)	6	4	6	4	1	21
T/F : MIDDLE ZONE (21 Storeys)	8	0	7	5	0	20
T/F : HIGH ZONE (2 Storeys)	6	0	5	5	2	18
BLOCK 1	312	88	289	203	26	918
BLOCK 2	312	88	289	203	26	918
Total	624	176	578	406	52	1836
Overall % mix	33.99%	9.59%	31.48%	22.11%	2.83%	100%
Average Household Size	1.2	2.4	3.1	4.4	6.2	-
Population	749	423	1792	1787	323	5074

Total Flat production = 1,836 units

$$\begin{aligned}
 \text{GFA (FLAT TOTAL) : LOW ZONE} &= (678.58\text{m}^2 \times 22) \times 2 = 29,857.52\text{m}^2 \\
 \text{MIDDLE ZONE} &= (644.71\text{m}^2 \times 21) \times 2 = 27,077.82\text{m}^2 \\
 \text{HIGH ZONE} &= (646.75\text{m}^2 \times 2) \times 2 = 2,587.00\text{m}^2 \\
 \text{TOTAL} &= 59,522.34\text{m}^2
 \end{aligned}$$

$$\begin{aligned}
 \text{TOTAL GFA : LOW ZONE} &= (890.84\text{m}^2 \times 22) \times 2 = 39,196.96\text{m}^2 \\
 \text{MIDDLE ZONE} &= (856.12\text{m}^2 \times 21) \times 2 = 35,957.04\text{m}^2 \\
 \text{HIGH ZONE} &= (843.70\text{m}^2 \times 2) \times 2 = 3,374.80\text{m}^2 \\
 \text{PODIUM DECK} &= (93.64 + 17.84 + 14.56 + 14.56)\text{m}^2 \times 2 = 281.20\text{m}^2 \\
 \text{1/F} &= 14.62\text{m}^2 \\
 \text{G/F} &= (300.92 + 297.92 + 17.85 + 14.85 + 72.59)\text{m}^2 \times 2 = 776.72\text{m}^2 \\
 \text{TOTAL GFA} &= 79,601.34\text{m}^2
 \end{aligned}$$

$$\text{OVERALL EFFICIENCY} = 59,522.34\text{m}^2 / 79,601.34\text{m}^2 = 74.77\%$$

$$\text{TOTAL GFA (DOMESTIC) FOR RCHE} = 677.42\text{m}^2 + 720.69\text{m}^2 + 1025\text{m}^2 = 2,423.11\text{m}^2$$

$$\text{TOTAL GFA OF THE DEVELOPMENT} = 79,601.34\text{m}^2 + 2,423.11\text{m}^2 = 82,024.45\text{m}^2$$

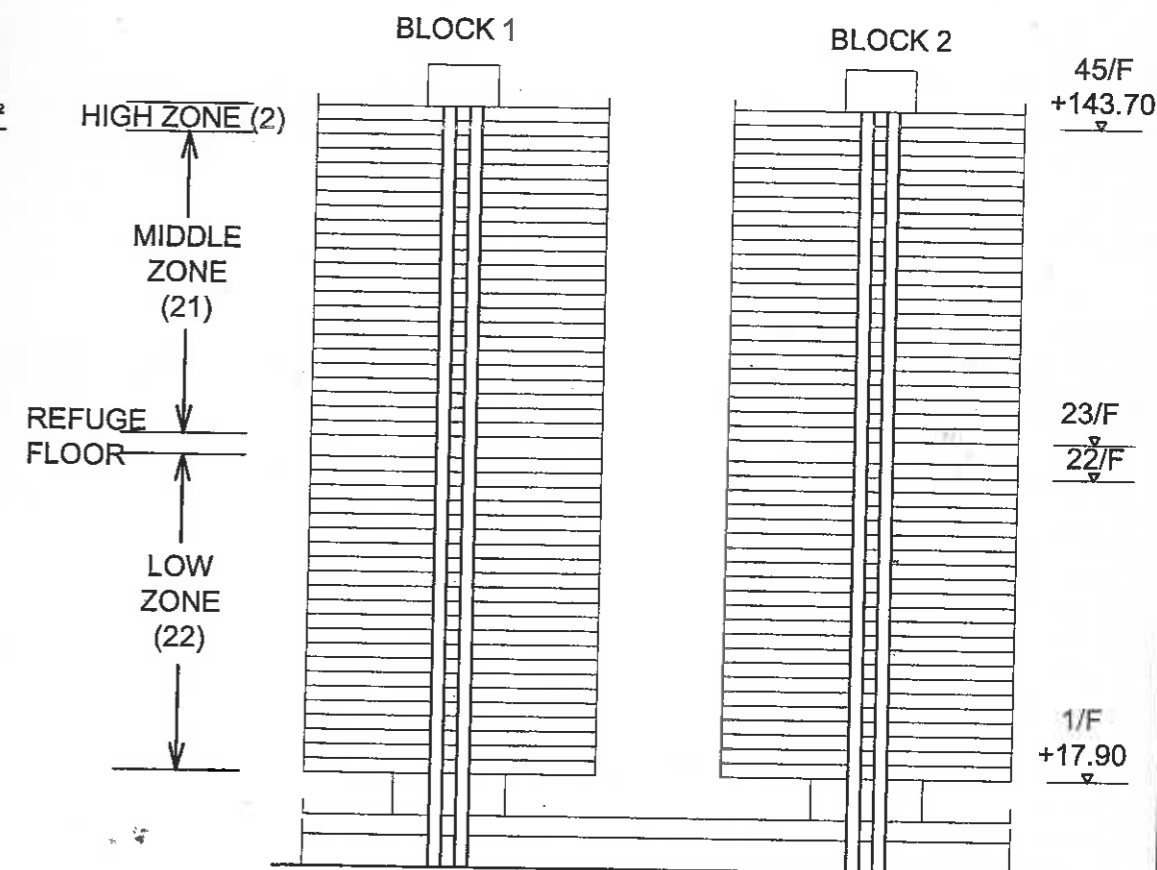
$$\text{DOMESTIC P.R.} = 82,027.45\text{m}^2 / 11,189\text{m}^2 (\text{SITE AREA}) = 7.33$$

$$\text{OPEN SPACE REQUIRED} : 5,074\text{m}^2$$

$$\text{OPEN SPACE PROVIDED} : 6,464\text{m}^2$$

PARKING PROVISION:

	1 SPACE PER 13 FLATS
PRIVATE CAR	1,212 (EXCLUDING 1/2P) / 16 = 76
L.G.V	1,212 / 100 + 1 (FOR RCHE) = 13
MOTORCYCLE	76 / 10 = 8
L/UL BAY	2 + 1 (FOR RCHE) = 3
AMBULANCE LAY-BY	FOR RCHE = 1



SECTION

DATE : 13-04-2002

TUNG TAU (PHASE 9) CALCULATION



ELEVATION A (FACING PRINCE EDWARD ROAD)



ELEVATION B (FACING LOK SIN ROAD)



PERSPECTIVE

PART III - DEVELOPMENT PROGRAMME

PROPOSED PUBLIC RENTAL HOUSING REDEVELOPMENT AT TUNG TAU ESTATE PHASE 9

PROPOSED PROJECT DEVELOPMENT PROGRAMME - REDEVELOPMENT OF TUNG TAU ESTATE PHASE 9 (AS AT 03/02)

[illegible]

PDR1	▼	ENDORSE DEV. PARAMETER / CONCEPTUAL LAYOUT / COST CEILING
SPC	▼	APPROVE DEV. PARAMETER / CONCEPTUAL LAYOUT / COST CEILING
PDR2	▼	ENDORSE MASTER LAYOUT / PROJECT BUDGET
BC2	▼	APPROVE MASTER LAYOUT / PROJECT BUDGET
DDRP	▼	APPROVE DETAILED DESIGN

PART IV - PROJECT DEVELOPMENT BUDGET

PROPOSED PUBLIC RENTAL HOUSING REDEVELOPMENT AT TUNG TAU ESTATE PHASE 9

SUMMARY OF SITE DEVELOPMENT & CONSTRUCTION COST BUDGET NO. 2 (For BC Submission)

Project : Redevelopment of Tung Tau Estate Phase 9 (PHDP Code : KL22RR)

	COST HEADS	WORK ELEMENTS	BUDGET COST		
			HA Fund (M\$)	Lotteries Fund (\$M)	Total (\$M)
(a)	Site Development Cost	Site Formation Demolition Sub-total :	11.236 11.236	- -	11.236 11.236
(b)	Construction Cost	Foundation Building Other separate contract Sub-total :	100.627 500.043 1.668 602.338	2.488 12.429 0.041 14.958	103.115 512.472 1.709 617.296
(c)	Other Project Costs (2% on (a) & (b))	Civil engineering and geotechnical studies, site investigation, material testing and the like Total Site Development and Construction Costs (a)+(b)+(c) :	12.271 625.845	0.299 15.257	12.571 641.103

Notes :

- (1) All prices are at June 2001 price level and adjusted for tender price inflation to tender in dates of contracts based on -3.3% per annum from July 01 to Dec 01 and 0.7% per annum from Jan 2002 onwards.
- (2) Apportionment of the Construction Costs are in accordance with the existing cost apportionment guidelines set out in the relevant DCMBI.
- (3) The costs for softlandscaping and utilities connections have been grouped under Other Separate Contracts.
- (4) The fluctuation provisions have been worked out based on the formula as shown on the Guidance Notes for Standard Cost Yardsticks.
- (5) Development Contingencies has been allowed for non-standard blocks/building and elements" in the Site Development and Construction Costs.
- (6) Other Project Costs provided at 2% of the Site Development and Construction Cost which is an allowance for traffic and environmental studies, land surveying studies and other engineering studies, site investigation geotechnical advisory service, construction material test etc. carried out by direct testing contractor, etc.
- (7) The Development and Construction Costs of RCHE and apportioned costs (excluding demolition cost) for the Portion are to be charged to Lotteries Funds.
- (8) A sum of \$130,000 and \$280,000 have been included in "Others"-in Item 6.0 in the External Works for the installation of video-cam system and diversion of services.

Exclusions :

- (1) Project Management Costs, e.g. professional services & overheads, consultant fees, etc. and other Project Costs, e.g. ancillary project expenses, financing and legal costs/expenses, etc.
- (2) The Development and Construction Costs of RCHE and apportioned costs (excluding demolition cost) for the Portion are to be charged to Lotteries Funds.

Basis of the Budget :

- (1) Cost of yardsticks have been used in the calculation of building works and building services to all buildings, carpark, welfare/ancillary facilities and external works.
- (2) Cost for demolition works is based on the Demolition Contract Sum.
- (3) Revised sketches received on 28 March 2002.

Prepared by : QS/C8

Date : _____

Project : Redevelopment of Tung Tau Estate Phase 9 (PHDP Code : KL22RR)

				COST PORTIONS								Common items		Total	Total HA+Lott	Total WEL - RCHE	Lotteries Fund WEL - RCHE		
PRH	HOS	CC	CP (private)	CP (LGV)	WEL	PTI	UN	GN	TS	EW									
CFA of Cost Portions (m2)				95,127	-	-	3,898	965	-	446	-	-	420	100,856	103,338	2,482 100%	2,482 100%		
COST ITEMS				Estimated Cost in \$,000												HA- Wel RCHE + LF- Wel RCHE		Fluctuation Provisions	
A. Site Development & Construction Cost Budget At June 2001 (Excluding Other Project Costs & Tender Price Inflation)																			
1.0 Site Development Costs																			
1.1 Site Formation Contract				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1.2 Demolition Contract				10,598	-	-	434	107	-	-	50	-	-	47	11,236	11,236	-	-	
2.0 Construction Costs																			
2.1 Foundation Contract				96,281	-	-	3,945	977	-	-	452	-	-	-	101,655	104,168	2,513	2,513	
2.2 Building Contract																			
2.21 Building (excl. building services)				367,354	-	-	14,249	3,973	-	-	1,675	-	-	387,251	396,553	9,302	9,302	14,540	
2.22 Building Services				66,202	-	-	2,410	596	-	-	748	-	-	69,956	72,029	2,073	2,073	-	
2.23 Transfer Structures				-	-	-	-	-	-	-	-	-	-	17,393	17,821	428	428	572	
2.24 Public Transport Interchange				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2.25 External Works for commonly shared elements				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2.26 External Works for Specific Businesses				-	-	-	-	-	-	-	-	-	26,696	26,696	27,353	657	657	833	
2.27 Automated Refuse Collection System				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2.3 Other Separate Contracts (incl. Soft landscape)				-	-	-	-	-	-	-	-	-	1,668	1,668	1,709	41	41	-	
Cost Budget At June 2001 Price Level (A)				540,435	-	-	21,038	5,653	-	-	2,925	-	17,393	28,411	615,855	630,869	15,014	15,014	15,945
B. Cost Budget Projected To Proposed Dates of Tenders (Cost in Item (A) plus Cost x (v), (w), (y) or (z))																			
1.0 Site Development Costs																			
1.1 Site Formation Contract																			
1.2 Demolition Contract				Contract Total (\$'M)															
2.0 Construction Costs				\$11,236	10,598	-	-	434	107	-	50	-	-	47	11,236	11,236	-	-	-
2.1 Foundation Contract				\$103,115	95,308	-	-	3,905	967	-	447	-	-	0	100,627	103,115	2,488	2,488	-
2.2 Building Contract				\$512,472															
2.21 Building (excl. building services)					366,436	-	-	14,213	3,963	-	0	-	-	386,283	395,562	9,279	9,279	14,504	
2.22 Building Services					66,036	-	-	2,404	595	-	746	-	-	69,781	71,849	2,068	2,068	-	
2.23 Transfer Structures					-	-	-	-	-	-	-	-	-	17,350	17,777	427	427	571	
2.24 Public Transport Interchange					-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2.25 External Works for commonly shared elements					-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2.26 External Works for Specific Businesses					-	-	-	-	-	-	-	-	26,629	26,629	27,284	655	655	831	
2.27 Automated Refuse Collection System					-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2.3 Other Separate Contracts (incl. Soft landscape)				\$1,709	-	-	-	-	-	0	-	-	-	1,668	1,668	1,709	41	41	-
Cost Budget Projected To Proposed Dates Of Tenders				\$628,532 (B)	538,378	-	-	20,956	5,632	-	2,914	-	17,350	28,344	613,574	628,532	14,958	14,958	15,906
Types of Contract																			

Types of Contract

Site Formation

Demolition

Foundation

Building (for inflation adjustment, "External Works", "Others", etc.,
Tender-In Dates to be taken the same as "Building")

Prepared by : QS/C8

Date :

Tender In Dates

07/01 to 12/01

01/02 to 11/02

07/01 to 12/01

01/02 to 12/03

Adjustment for months after June 2001

Months x # % / 12 = (v)

Months x # % / 12 = (w)

6 Months x -3.3 % / 12 +

11 Months x 0.7 % / 12 = -0.0101 (y)

6 Months x -3.3 % / 12 +

24 Months x 0.7 % / 12 = -0.0025 (z)

Project : Redevelopment of Tung Tau Estate Phase 9 (PHDP Code : KL22RR)

PRH - Public Rental Housing
HO - Home Ownership Scheme
CC - Commercial (Shopping) Centre
CP - Carpark
WEL - Welfare Facilities

RCHE - Residential Care Home for Elderly (87% funded by Lotteries Fund)
 PTI - Public Transport Interchange
 UN - Unallocable
 GN - Government Non-reimbursable
 TS - Transfer Structure
 EW - External Works

- (1) All prices are at June 2001 price level and adjusted for tender price inflation to tender in dates of contracts based on -3.3% per annum from July 01 to Dec 01 and 0.7% per annum from Jan 2002 onwards.
- (2) Apportionment of the Construction Costs are in accordance with the existing cost apportionment guidelines set out in the relevant DCMBI.
- (3) The costs for softlandscaping and utilities connections have been grouped under Other Separate Contracts.
- (4) The fluctuation provisions have been worked out based on the formula as shown on the Guidance Notes for Standard Cost Yardsticks.
- (5) Development Contingencies has been allowed for non-standard blocks/building and elements" in the Site Development and Construction Costs.
- (6) Other Project Costs provided at 2% of the Site Development and Construction Cost which is an allowance for traffic and environmental studies, land surveying studies and other engineering studies, site investigation geotechnical advisory service, construction material test etc. carried out by direct testing contractor, etc.
- (7) The Development and Construction Costs of RCHE and apportioned costs (excluding the demolition cost) for the Portion are to be charged to Lotteries Funds.
- (8) A sum of \$130,000 and \$280,000 have been included in "Others" in Item 6.0 in the External Works for the installation of video-cam system and diversion of services.

- (1) Project Management Costs, e.g. professional services & overheads, consultant fees, etc. and other Project Costs, e.g. ancillary project expenses, financing and legal costs/expenses, etc.
- (2) The Development and Construction Costs of RCHE and apportioned costs (excluding the demolition cost) for the Portion are to be charged to Lotteries Funds.

- (1) Project Management Costs, e.g. professional services & overheads, consultant fees, etc. and other Project Costs, e.g. ancillary project expenses,
- (2) Cost for demolition works is based on the Demolition Contract Sum.
- (3) Revised sketches received on 28 March 2002.

Date : _____

(1) Nil

Cost at June 2001 Price Level					No. of Flats	Cost per Flat			TOTAL
						Foundation (Incl/ Excl * Caps)	Building Works (Incl/ Excl * Caps)	Building Services (Incl/ Excl * Caps)	
1.0 Non-standard Blocks based on Construction Cost Yardsticks									
(a) Block 1 (45 Storeys) (NH1, Opt6)									
-	1P Flat	33.02	m2 CFA/Flat	(31.90)	312	13,010	114,315	21,628	148,953
-	2P Flat	41.31	m2 CFA/Flat	(38.90)	88	16,276	143,015	27,058	186,349
-	1B Flat	53.94	m2 CFA/Flat	(51.20)	289	21,252	186,740	35,331	243,323
-	2B Flat	70.97	m2 CFA/Flat	(68.30)	203	27,962	245,698	46,485	320,145
-	3B Flat	83.58	m2 CFA/Flat	(80.20)	26	32,931	289,354	54,745	377,030
					918				
(b) Block 2 (45 Storeys) (NH1, Opt6)									
-	1P Flat	33.02	m2 CFA/Flat	(31.90)	312	13,010	114,315	21,628	148,953
-	2P Flat	41.31	m2 CFA/Flat	(38.90)	88	16,276	143,015	27,058	186,349
-	1B Flat	53.94	m2 CFA/Flat	(51.20)	289	21,252	186,740	35,331	243,323
-	2B Flat	70.97	m2 CFA/Flat	(68.30)	203	27,962	245,698	46,485	320,145
-	3B Flat	83.58	m2 CFA/Flat	(80.20)	26	32,931	289,354	54,745	377,030
					918				
(standard CFA/flat in bracket)									
Cost per Flat x Flat No. = Sub-Total (A) (Total CFA of standard flat) = 92,212 m2)						36,331	319,239	60,399	415,969 (\$4511/m2 CFA) (\$226563 per flat)
2.0 Adjustments to Item 1.0 Above									
Non-standard domestic design :-									
(a) Adjust for non-standard formwork							1,000	-	1,000
(b) Allow for Bay window							2,772	-	2,772
(c) Add for entrance lobbies, services rooms for domestic blocks in car park						2,791	10,333	-	13,124
(d) Extra for providing roof features							1,000	-	1,000
(e) Extra for providing features in the facade							1,000	-	1,000
Project Specific Design :-									
(f) Adjustment for transfer zone and refuge floor							1,730	-	1,730
(g) Adjust for extra foundation cost based on the preliminary design						52,555	-	-	52,555
(h) Adjust for structural cost for high rise construction and reinforcement refinement							7,088	-	7,088
(i) Allow 6mm glazing and well gasket window for noise abatement							-	-	0
(j) Allow for Air conditioning for flat with noise level exceeding 72 db(A)							230	-	230
(l) Allow for Drying rack							-	6,480	6,480
(m) Adjust for building service cost based on actual design							400	-	400
(n) Allow extra fluctuation for longer construction period							-	(3,861)	(3,861)
(k) Extra for provision of sunken planters on podium							3,000	-	3,000
							2,000	-	2,000
Cost per Flat x Flat No. + domestic portion in carpark = Sub-Total (B) (Total CFA = 95,107 m2)						55,346	30,553	2,619	88,518 (\$931/m2 CFA) (\$48212 per flat) 20.63% over that calculated based on Standard Yardsticks
5.0 Development Contingency									
Allow 5% for Development Contingency						4,584	17,490	3,151	25,225
Sub-Total (C)						4,584	17,490	3,151	25,225 (\$265/m2 CFA) (\$13739 per flat)
Total Cost of Domestic Block - Public Rental Housing. at June 2001 Price Level = (A) + (B) + (C) (including Provisions for Contract Fluctuations)						96,261	367,282	66,169	529,712 (\$5570/m2 CFA) (\$288514 per flat)
* Delete as appropriate									

Delete as appropriate

Remark :

- Foundation cost is based on the apportioned cost of estimated Foundation Cost.
- The costs for entrance lobbies and services rooms for domestic blocks under podium in car park are apportioned from Carpark buildings.
- A sum of \$5M is allowed for providing sunken planters and architectural features, as requested by APM/BSE45 and A/118's fax message received on 14.2.02.
- The non-standard domestic design from above items 2(a) to 2(e) are in the sum of \$18,896,000.00 which is about 4.54% (i.e. less than 5%) of standard yardsticks NH1, Opt.6.

Cost at <u>June 2001</u> Price Level		Space (No.)	Cost per Space			TOTAL
			Foundation (Incl/ Excl * Caps)	Building Works (Incl/ Excl * Caps)	Building Service (Incl/ Excl * Caps)	
1.0 Carpark (Integrated Comm./Carpark* OR Freestanding Carpark Building*) based on Construction Cost Yardsticks						
(a) Carpark Portion:	Area of which yardstick is based upon					
- Motorcycle	(7 m2 CFA per space)*	8	4,738	22,460	4,530	31,728
- Private	(43 m2 CFA per space)	76	28,430	134,760	27,180	190,370
*8 nos. of motorcycle space is equal to 2 nos. of private parking space		78				
Sub-total (A) :-			\$'000			
(Total CFA based on that of Yardstick = <u>3,325</u> m2 & Average CFA per carparking space = <u>43</u> m2)			2,199	10,421	2,102	14,722
						(\$4427/m2 CFA) (\$188744 per space)
2.0 Adjustment to Item 1.0 Above			\$'000			
(a) Adjust for extra foundation cost based on the preliminary design			1,558			1,558
(b) Adjust for cost based on the design			-	2,644	193	2,837
(c) Adjust for headroom				505		505
						0
Sub-total (B) :-			1,558	3,149	193	4,900
(Total CFA based on Actual Design = <u>3,898</u> m2 & Average CFA per carparking space = <u>50</u> m2)						(\$1257/m2 CFA) (\$62821 per space) 28.39% over that calculated based on Standard Yardsticks
3.0 Development Contingency Allow 5% for Development Contingency			\$'000			
			188	679	115	982
Total Cost of Carpark Portion at June 2001 Price Level = (A) + (B) + Item 3.0 (including Provisions for Contract Fluctuations)			\$'000			
			3,945	14,249	2,410	20,604
						(\$5286/m2 CFA) (\$264154 per space)

Delete as appropriate

Notes

- Cost per space in the Total Column represents the average cost per space including the motorcycle and private car park.
- Foundation cost is based on the apportioned cost of estimated Foundation Cost.
- Building cost is based on the apportioned cost of Carpark under podium of domestic buildings.

Cost at <u>June 2001</u> Price Level	Space (No.)	Cost per Space			TOTAL
		Foundation (Incl/ Excl * Caps)	Building Works (Incl/ Excl * Caps)	Building Service (Incl/ Excl * Caps)	
1.0 <u>Carpark (Integrated Comm./Carpark* OR Freestanding Carpark Building*) based on Construction Cost Yardsticks</u>					
(a) Carpark Portion	Area of which yardstick is based upon				
- Lorry	(84 m2 CFA per space)	11	55,530	301,720	53,090
		11			410,340
Sub-total (A) :-		611	3,319	584	4,514
(Total CFA based on that of Yardstick = 924 m2 & Average CFA per carparking space = 84 m2)					(\$4885/m2 CFA) (\$410364 per space)
2.0 <u>Adjustment to Item 1.0 Above</u>					
(a) Adjust for extra foundation cost based on the preliminary design		319	-	-	319
(b) Adjust for cost based on the design		-	340	(16)	324
(c) Adjust for headroom			125		125
Sub-total (B) :-		319	465	(16)	768
(Total CFA based on Actual Design = 965 m2 & Average CFA per carparking space = 88 m2)					(\$796/m2 CFA) (\$69818 per space) 16.30% over that calculated based on Standard Yardsticks
3.0 <u>Development Contingency</u>					
Allow 5% for Development Contingency		47	189	28	264
Total Cost of Carpark Portion at June 2001 Price Level = (A) + (B) + Item 3.0 (including Provisions for Contract Fluctuations)		977	3,973	596	5,546
					(\$5750/m2 CFA) (\$504182 per space)

* Delete as appropriate

Notes

- Cost per space in the Total Column represents the average cost per space including the covered lorry parking spaces.
- Foundation cost is based on the apportioned cost of estimated Foundation Cost.
- Building cost is based on the apportioned cost of Carpark under podium of domestic buildings.
- 2 nos. of LGV is at external area and excluded from covered parking space.

Cost at June 2001 Price Level	CFA (m2)	Estimated Cost		TOTAL
		Foundation (Incl/ Excl * Caps)	Building (Incl/ Excl * Caps)	
		← S'000 →		
1.0 Ancillary/Welfare Facilities in Domestic Block / Other Buildings* (G/F or Upper Floors)				
(a) Ancillary/Welfare facilities (no fitting out included)				
RCHE in Carpark	2,482			
- Building (excluding building services)		2,393	8,859	11,252
- Building Services			1,974	1,974
(b) Fitting Out for Ancillary/Welfare Facilities (Total area to be fitted out = _____ m2 CFA)		-		
2.0 Other Adjustments for Item 1.0 Above				
3.0 Development Contingency Allow 5% for Development Contingency		120	542	662
Total Cost of Welfare / Unallocable Portion at June 2001 Price Level = Total of Items in 1.0 to 3.0 (including Provisions for Contract Fluctuations)		← S'000 →		
		2,513	11,375	13,888 (\$5595/m2 CFA)

* Delete as appropriate

* Delete as appropriate

Remark :

- Welfare Portion includes the RCHE (approx. 2482m2) in the carpark.
- Foundation cost is based on the apportioned cost of estimated Foundation Cost.
- Building cost is based on the apportioned cost of Carpark under podium of domestic buildings.
- The development and construction costs (excluding demolition) for RCHE is funded by Lotteries Funds.

Project : Redevelopment of Tung Tau Estate Phase 9 (PHDP Code : KL22RR)

Cost at June 2001 Price Level	CFA (m2)	Estimated Cost		TOTAL
		Foundation (Incl/ Excl * Caps)	Building (Incl/ Excl * Caps)	
1.0 Ancillary Facilities in Domestic Block / Other Buildings* (G/F or Upper Floors)		\$'000		
(a) Ancillary facilities (no fitting out included) in Carpark Building				
- Estate Management Office (excluding building services)	326	315	1,183	1,498
- Building Services		-	636	636
- Maintenance storeroom (excluding building services)	100	96	344	440
- Building Services			63	63
- Cleansing Contractor's Office (excluding building services)	20	19	69	88
- Building Services			13	13
(b) Fitting Out for Ancillary Facilities (Total area to be fitted out = _____ m2 CFA)			-	-
2.0 Other Adjustments for Item 1.0 Above				
3.0 Development Contingency Allow for 5% Development Contingency		22	115	137
Total Cost of Welfare / Unallocable Portion at June 2001 Price Level = Total of Items in 1.0 to 3.0 (including Provisions for Contract Fluctuations)		452	2,423	2,875 (\$6446/m2 CFA)

* Delete as appropriate

Remark :

- Unallocable Portion includes the following in the Carpark Building :

	CFA (m2)
Estate Management Office (EMO)	326
Maintenance storeroom	100
Cleansing Contractor's Office	20
	<u>446</u>

- Foundation cost is based on the apportioned cost of estimated Foundation Cost.
- Building cost is based on the apportioned cost of Carpark under podium of domestic buildings.

Project : Redevelopment of Tung Tau Estate Phase 9 (PHDP Code : KL22RR)

Cost at June 2001 Price Level	CFA (m2)	Estimated Cost		TOTAL
		Foundation (Incl/ Excl * Caps)	Building (Incl/ Excl * Caps)	
1.0 Mutual Aids Community in Domestic Block / Other Buildings* (G/F or Upper Floors)		\$'000		
(a) Ancillary/Welfare facilities (no fitting out included)				
MAC in Carpark	20			
- Building (excluding building services)		19	69	88
- Building Services		-	31	31
(b) Fitting Out for Ancillary/Welfare Facilities (Total area to be fitted out = _____ m2 CFA)				
2.0 Other Adjustments for Item 1.0 Above				
3.0 Development Contingency Allow for 5% Development Contingency		1	5	6
Total Cost of Mutual Aids Community at June 2001 Price Level = Total of Items in 1.0 to 3.0 (including Provisions for Contract Fluctuations)		20	105	125 (\$6250/m2 CFA)

* Delete as appropriate

Remark :

- Domestic Portion includes the MAC (approx. 20m2) in the carpark.
- Foundation cost is based on the apportioned cost of estimated Foundation Cost.
- Building cost is based on the apportioned cost of estimated Carpark Cost.

Transfer Structures - commonly Shared Across Phases of the Development and Among Various HA Business)

Project : Redevelopment of Tung Tau Estate Phase 9 (PHDP Code : KL22RR)

Cost at June 2001 Price Level	Estimated Cost		TOTAL
	Building	Others	
1.0 Transfer Plate	\$'000		
(a) Transfer structure below Domestic Blocks	16,972	-	16,972
Sub-total (A) :-	16,972	-	16,972
2.0 Development Contingency Allow 5% for Development Contingency	\$'000		
	849	-	849
Sub-total (B) :-	849	-	849
Total Cost of Commonly Shared Transfer Structures at June 2001 Price Level = (A) + (B) (including Provisions for Contract Fluctuations)	17,821	-	17,821

* Delete as appropriate

Notes

External Works - Commonly Shared Across Phases of the Development and Amongst Various HA Businesses)

Project : Redevelopment of Tung Tau Estate Phase 9 (PHDP Code : KL22RR)

Total GEA = 11,016 m2; Total CFA = 103,337 m2; Total LAA = 10,152 m2

Cost at June 2001 Price Level	Estimated Cost		TOTAL
	Foundation (Incl/ Excl * Caps)	Building (Incl/ Excl * Caps)	
1.0 External Works (incl. Contract Price Fluctuation)	\$'000		
(a) External Works based on Yardsticks	-	22,266	22,266
(b) Add for street fire hydrant pump rooms, refuse collection point, etc. in car park	405	2,109	2,514
Sub-total (A)	405	24,375	24,780 (S240/m2 CFA) (S2249/m2 GEA)
2.0 Special External Works (incl. Contract Price Fluctuation)	\$'000		
(a) Works in borrowed site area and outside site boundary	-	641	641
(b) Slope work	-	630	630
Sub-total (B)	-	1,271	1,271 (S12/m2 CFA) (S115/m2 GEA)
3.0 Development Contingency	\$'000		
	20	1,282	1,302
Sub-total (C)	20	1,282	1,302 (S13/m2 CFA) (S118/m2 GEA)
Total Cost of Commonly Shared External Works at June 2001 Price Level = (A) + (B) + (C) (including Provisions for Contract Fluctuations)	425	26,928	27,353 (S265/m2 CFA) (S2483/m2 GEA)
4.0 Cost of Automated Refuse Collection System at June Price Level	\$'000		
5.0 Development Contingency	\$'000		
Total Cost of Automated Refuse Collection System at June Price Level = 4.0 to 5.0 (including Provisions for Contract Fluctuations)	-	-	(\$ __/m2 CFA) (\$ __/m2 GEA)
Cost at June 2001 Price Level	Estimated Cost		TOTAL
	Softlandscaping	Others	
6.0 Cost of Other Separate Contracts (incl. Softlandscaping Work) at June 2001 Price Level	\$'000		
	528	1,100	1,628
7.0 Development Contingency Allow 5% for Development Contingency	26	55	81
Cost of Other Separate Contracts (incl. Softlandscaping Work) at June 2001 Price Level = 6.0 to 7.0 (including Provisions for Contract Fluctuations)	554	1,155	1,709 (S17/m2 CFA) (S155/m2 GEA)

Remark :

- The cost on external works is based on yardstick.
- Foundation cost is based on the apportioned cost of estimated Foundation Cost.
- Building costs for service such as street fire hydrant pump room and refuse collection point are based on the apportioned cost of estimated Carpark cost.
- A sum of \$130,000 and \$280,000 have been included in "Others" in Item 6.0 for the installation of video-cam system and diversion of services.

Cost at <u>June 2001</u> Price Level	Estimated Cost		TOTAL
	Demolition/ Site Formation*	Others	
1.0 Estimate Cost for Demolition / Site Formation Works *	← \$'000 →		
(a) Demolition	11,236	-	11,236
(b) Site Formation Works	-	-	-
Sub-total (A) :-	← \$'000 →		
	11,236	-	11,236
2.0 Development Contingency	← \$'000 →		
Allow for 5% for Development Contingency	-	-	-
Sub-total (B) :-	← \$'000 →		
	-	-	-
Total Cost of Demolition / Site Formation Works *	← \$'000 →		
at June 2001 Price Level = (A) + (B)	11,236	-	11,236
(excluding Provisions for Contract Fluctuations)			

* Delete as appropriate

Notes

1. The cost for the demolition works is based on the Demolition Contract Sum.