

THE HONG KONG HOUSING AUTHORITY

Memorandum for the Building Committee

Proposed Master Layout Plan and Project Development Budget for the Redevelopment of Lam Tin Estate Phase 10

PURPOSE

To seek Members' approval to the proposed Master Layout Plan and Project Development Budget for the Redevelopment of Lam Tin Estate Phase 10.

BACKGROUND

- Lam Tin Phase 10 is a designated NCC site, which was released by the Home Affairs Department (HAD) in August 1997 for public housing development and facilities for elderly and the community. Located in the central part of Lam Tin, Phase 10 is bounded by Ping Tin Street to its south, St Paul's School (Lam Tin) to its east and Lam Tin Playground to its north and northwest. Location plan of Lam Tin Phase 10 is shown in **Part I** of the **Annex**.
- 3. The area of the site is about 0.25 hectare and is currently occupied by a community centre, an estate office and a post office. Upon the completion of fitting-out works of the new community hall in Lam Tin South Phase 8 by Architectural Services Department (ASD) in September 2002, these facilities will be demolished to make way for redevelopment.

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

Date

(a)	12 December 1991	Planning Brief for all Phases of Redevelopment of Lam Tin Estate approved by Development Progress Committee (DPC).
(b)	25 August 1998	Revised Planning Brief for the Redevelopment of Lam Tin Estate approved by Kowloon District Planning Conference (KDPC) (Paper No. KDPC 11/1998).
(c)	19 August 2000	Project Design Review Committee (PDRC) endorsed the revised Development Parameters,

Events

Conceptual Layout and Project Estimates for submission to Strategic Planning Committee

(d) 14 September 2000 Development Parameters and Project Development Cost Ceiling of Lam Tin Phase 9 & 10 approved by SPC (Paper No. SPC 58/2000).

(SPC) (Paper No. PDRC 23/2000).

- (e) 9 May 2001 Town Planning Board approved the rezoning of Lam Tin Phase 10 from 'GIC' to 'R(A)'.
- (f) 22 March 2002 Proposed Master Layout Plan and Project Development Budget for Lam Tin Phase 10 endorsed by PDRC for submission to Building Committee (BC) (Paper No. PDRC 13/2002).

MASTER LAYOUT PLAN

- 5. Lam Tin Phase 10 adopts site specific design to achieve a better integration with the immediate surroundings. The proposed Master Layout Plan is evolved from the Approved Development Parameters comprising of -
 - (a) One 25-storey Small Household Development (SHD) block based on Standard New Harmony Annex flat modules.
 - (b) One 5-storey Residential Care Home for the Elderly (RCHE) with 200 bed spaces.

- (c) Open space, a footbridge and associated modification work to the existing carpark building in Lam Tin Phase 4.
- 6. The project will provide 282 flats in 2005/2006. Private car parking spaces are already provided in the existing adjacent carpark building in Lam Tin Phase 4. Within the project, one loading/unloading bay, one ambulance parking space and one refuse collection vehicle parking space are provided for the shared use of SHD and RCHE. In addition, one 16-seat van parking space is provided for the exclusive use of RCHE.
- 7. The proposed Master Layout Plan is shown in **Part II** of the **Annex**. The main design intents and themes are highlighted as follows -

Planning for Pedestrians

- (a) An integrated pedestrian linkage in terms of at grade access and footbridge connection is provided to link up the adjacent developments. It improves accessibility for the whole Lam Tin District from the MTR Station to the uphill Tak Tin Estate.
- (b) Along the pedestrian route, external open and semi-open spaces are created, which are inter-penetrated and linked by means of stairs, ramps, platforms and viewing decks. The visual linkage is enhanced and open spaces at various levels are integrated for people to enjoy outdoor activities.
- (c) Footbridge connection with ramps to Lam Tin Phase 4 is proposed to provide a traffic-free and barrier-free access for the disabled and elderly. Part of the carpark building in Lam Tin Phase 4 will be modified to allow for a wider and direct access.
- (d) Vehicular ingress and egress point of the loading/unloading area is segregated from the pedestrian passage.

Enhancing Social Sustainability

- (e) Social interaction is enhanced if residents have more opportunities to meet and interact. Formation of the interpenetrating open spaces provides more opportunities for such social interaction.
- (f) A sustainable community should have quick and convenient access to employment, education, safe living and leisure environment. The integrated pedestrian linkage improves accessibility and enhances the community sustainability of the whole Lam Tin District.
- (g) To further enhance sense of place and identity of neighborhood, art objects like sculptures, installations and graphic design with local character or specific theme will be installed along the pedestrian route to form an 'Art Trail'. Public participation is encouraged in the implementation of the trail.

Site Specific Building Design

- (h) The building is set back to dedicate part of site area to provide a spacious and convenient passage for pedestrians.
- (i) Part of the building is elevated to facilitate footbridge connection and to create the second level platform for recreational facilities.
- (j) The building is of a linear configuration to respond to the linear shape of the site and to avoid overlooking. The linear building footprint is slightly twisted to avoid straight and monotonous corridor and to maximize views towards Lam Tin Playground.
- (k) Roof profile is terraced to break down the scale. The descending skyline also gives identity to the building.

- (l) The flat modules are adopted mainly from the New Harmony Annex flat modules. The standardization enhances buildability and minimizes construction cost.
- (m) The layout of RCHE is designed to group the dormitories and facilities around a central communal atrium, which is connected with an internal staircase to all floors. The design allows natural light to penetrate into the interior and to capture the open playground view outside. Natural cross ventilation is provided by strategically positioning of window openings.
- (n) Architectural features and fins are provided at the roof levels, facades and gable end walls to give identity to the building.

Enhancing Environmental Performance

- (o) The building is orientated with majority of flats facing south or north.
- (p) The building is designed to allow natural lighting and cross ventilation in typical lift lobbies and corridors.
- (q) Part of the building is elevated from ground level to facilitate better natural ventilation and comfort at pedestrian levels.
- (r) Architectural fins are added to façade facing west as sun shading devices.
- (s) Photovoltaic (PV) system is proposed at roof levels of the building for demonstration of the use of renewable energy. About 160 PV panels will be installed to provide sufficient electricity for the use of public lighting in corridors. The capital cost of the system is estimated to be \$1.4 million. Further negotiation with the power company is needed for arrangement of connecting PV system to the grid system and for discussion if there is any cost so incurred. Detailed technical viability study is in Part III of the Annex.

It is noted that the system may not be most economical in payback period estimation, but innovative application is experimented at a project of this scale for long-term environmental consideration.

Landscape Design

- (t) The design theme is to creates a series of external spaces amid a congested urban development to serve the mostly elderly and singleton community.
- (u) A major gathering space at the ground level is a circular platform, which radiates to various geometric forms in the surrounding area.
- (v) Planting will be primarily lawn areas and seasonal flowers to give a sense of relaxation for strolling and leisure sitting. Tai Chi and morning exercise platforms are located in areas to capture the morning sun. Other leisure activities, such as chess playing, newspaper reading and sitting out are located in more secluded sheltered areas.

PROJECT DEVELOPMENT BUDGET

8. Based on the proposed Master Layout Plan, the total Project Development Budget of the SHD development is estimated to be \$161.964M. A breakdown of the proposed Project Development Budget is given in Part V of the Annex and is summarized as follows -

- 7 -

Table 1: Proposed Project Development Budget

	Cost Heads	Works Elements	Total \$/M
(a)	Site Development Cost	Demolition	3.581
(b)	Construction Cost	Foundation	7.429
	(including contingency)	Building	123.017
		Modification Works LT Ph.4 Carpark	2.939
		Other Separate Contracts	0.513
		Sub-total	133.898
(c)	Other Project Cost [2% on (a) + (b)]	Miscellaneous Cost	2.750
(d)	Total Site Development and [(a) + (b) + (c)]	d Construction Cost	140.229
(e)	Project Management Cost [15.5% of (d)]	Professional services and overheads, consultation fees and consultant site staff etc.	21.735
(f)	Project Development Bud	lget [(d) + (e)]	161.964

- 9. The total Project Development Budget of the RCHE development is estimated to be \$33.137M. Social Welfare Department (SWD) had confirmed that the RCHE development will be funded by Lotteries Fund.
- 10. The proposed Project Development Cost in comparison with the Approved Project Development Cost Ceiling for Lam Tin Phase 10 is as follows -

Table 2: Combined Cost Comparison

	(a)	(b)	(c)	(d)	(e)
Lam Tin	Proposed	Approved	Proposed Unit	June 2001	June 2001
Phase 10	Project	Project	Construction	Construction	Construction
	Development	Development	Cost adjusted	Cost	Cost
	Cost	Cost Ceiling	to tender-in	Yardstick for	Yardstick for
		(Paper No. SPC 58/2000)	date	SHD	SHD adjusted to tender-in date
	(\$/m² CFA)	(\$/m² CFA)	(\$/m ² CFA)	(\$/m² CFA)	(\$/m² CFA)
SHD	10,091	11,597	6,829	6,429	6,411

- 11. The proposed Project Development Cost is within the Project Development Cost Ceilings approved by SPC.
- 12. The proposed unit construction cost (excluding demolition, external works, soft landscaping, other sundry costs and project management costs) of the SHD development is higher than the June 2001 Cost Yardsticks adjusted to tender-in-date by +6.52%, which is attributed to the following -

		6 over	Yardstick
(a)	Transfer plate at podium level		+2.10
(b)	Adjustment for composite building and congested	d	+3.66
	site		
(c)	Suspended ceiling for lift lobbies and corridors		+0.76
	to conceal services pipes as per DCMBI nos.		
	D30/99 & D17/00		
		Total	+6.52

AVAILABILITY OF FUNDS

13. Based on the proposed Project Development Budget, the estimated yearly expenditure for the project is as follows -

Estimated Expenditure (\$/M)									
Pre- 2001/02 2002/03 2003/04 2004/05 2005/06 Post 2006 Total									
Estimate based on Proposed Project Development Budget	0.000	3.544	9.164	52.436	91.867	4.953	161.964		

DEVELOPMENT PROGRAMME

14. The key dates for the development programme is as follows -

(a)	Master Layout Plan	PDRC (2)	03/2002
(b)	Master Layout Plan	BC	05/2002
(c)	Detailed Design	DDRP	11/2002
(d)	Demolition	Tender Out	06/2002
		Commencement	10/2002
		Completion	04/2003
(e)	Piling	Tender Out	12/2002
	•	Commencement	04/2003
		Completion	04/2004
(f)	Building	Tender Out	12/2003
		Commencement	04/2004
		Completion	02/2006

15. The detailed programme is in **Part IV** of the **Annex**. The site availability date will be subject to completion of fitting-out works of the new community hall in Lam Tin South Phase 8 by ASD.

RECOMMENDATION

16. It is recommended that the proposed Master Layout Plan and Project Development Budget of \$161.964M for the Redevelopment of Lam Tin Estate Phase 10 as described above and in the **Annex** to this Paper be approved.

DISCUSSION

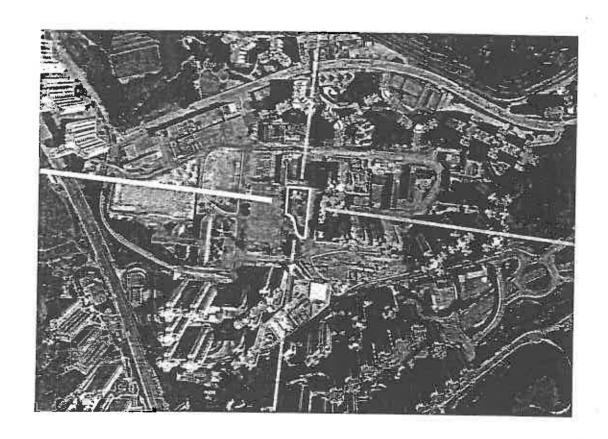
17. At the next meeting of the Building Committee to be held on 16 May 2002, Members will be invited to approve the recommendation in Paragraph 16 above.

File Ref.: HD(AR) 7/700/10

Date : 10 May 2002

REDEVELOPMENT OF LAM TIN ESTATE PHASE 10

PROPOSED MASTER LAYOUT PLAN AND PROJECT DEVELOPMENT BUDGET



ISSUE NO. 1

BC SUBMISSION MAY 2002

DEVELOPMENT AND CONSTRUCTION BRANCH

BC SUBMISSION

Drawing No.

PART I: LOCATION PLAN AND SITE STUDIES

- 1. Location Plan
- 2. Evaluation of Master Layout Plan
- 3. Development Parameters

PART II: MASTER LAYOUT PLAN

Proposed Pedestrian Circulation (Ground Level) Proposed Pedestrian Circulation (Podium Level) Site Layout Plan

1. General Layout Plans

· · · · · · · · · · · · · · · · · · ·	
Block Plan	VI 20/10/4 mp or
RCHE G/F & SHD G/F Plan	KL29/10/A/PR-01
SHD Upper G/F Plan	KL29/10/A/PR-02
RCHE 1st & SHD 1st Floor Plan	KL29/10/A/PR-03
RCHE 2nd & SHD 2nd Floor Plan	KL29/10/A/PR-04
	KL29/10/A/PR-05
RCHE 3rd & SHD 3rd Floor Plan	KL29/10/A/PR-06
RCHE 4th & SHD 4th – 5th Floor Plan	KL29/10/A'/PR-07
RCHE 5th & SHD 6th Floor Plan	KL29/10/A/PR-08
SHD 7th – 9th & RCHE 6th Floor Plan	KL29/10/A/PR-09
SHD 10th – 21st Floor Plan	KL29/10/A/PR-10
SHD 22nd Floor Plan	
SHD 23rd Floor Plan	KL29/10/A/PR-11
SHD 24th – 25th Floor Plan	KL29/10/A/PR-12
Roof and Upper Roof Plan	KL29/10/A/PR-13
	KL29/10/A/PR-14
Proposed Modification at Carpark – G/F (Lam Tin Phase 4)	KL29/4/CP/A/SK-01
Proposed Modification at Carpark – 1/F (Lam Tin Phase 4)	KL29/4/CP/A/SK-02

2. Section and Elevations

Section A-A	7	VI 20/10/4 /DD 16
East Elevation	VE.	KL29/10/A/PR-15
		KL29/10/A/PR-16
West Elevation		 . *
		KL29/10/A/PR-17

BC SUBMISSION

Drawing No.

3. Landscape Drawings

Ground Floor Landscape Plan SHD 1/F & Podium Garden SHD 7/F & Podium Garden

KL29/10/SITE/L/L0-01 KL29/10/SITE/L/L0-02 KL29/10/SITE/L/L0-03

PART III: VIABILITY STUDY FOR PHOTOVOLTAIC SYSTEM

PART IV: DEVELOPMENT PROGRAMME

PART V: PROJECT DEVELOPMENT BUDGET

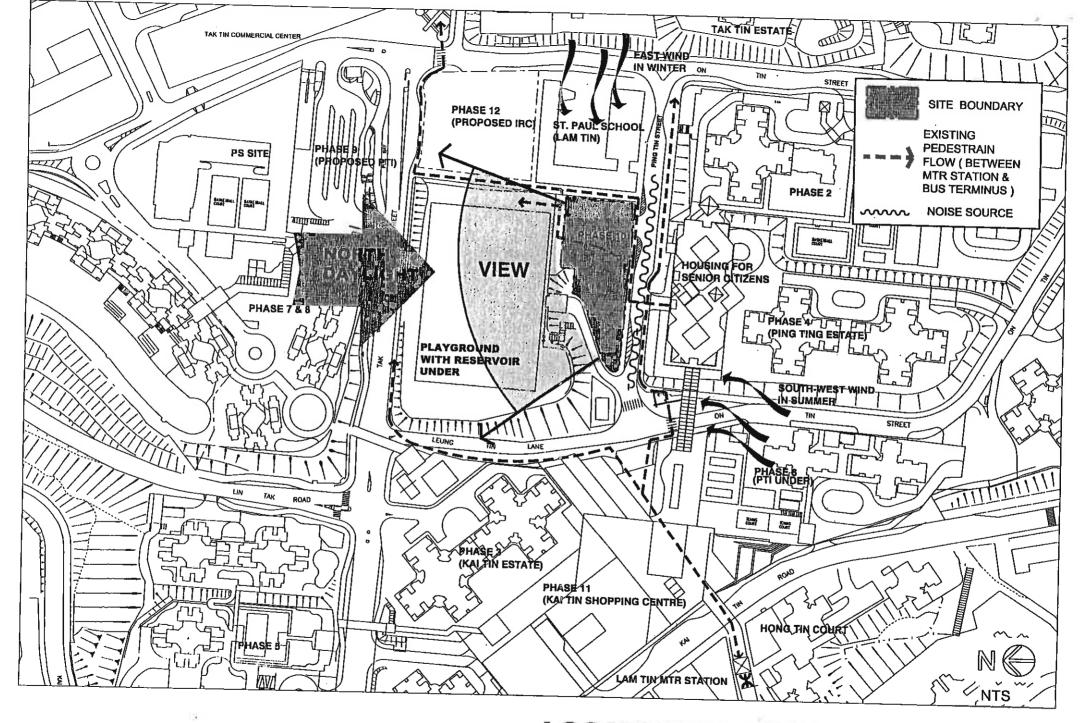
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SIGNED:

Mr. John C.Y. NG (CA/3)

DATE

25 April 2002



LOCATION PLAN AND SITE STUDIES

2. Evaluation of Master Layout Plan

Approved by SPC	Master Layout Plan	Remarks
(Paper No. SPC 58/2000)		Kemarks
2.1 The Site		
2		
2.1.1 Lam Tin Phase 10 is one of the		
14 small sites previously		, a
reserved for Neighbourhood	65	4
Community Centres (NCC) by		
HAD. In 8/1997, relevant	**	
policy bureau and departments	_	
agreed that these reserved sites		2
could be considered for elderly		25
housing as well as other related		W
services.	92	2.
2.1.2 The area of the site is about	Completion of fitting-out works	=
0.25 hectare and is currently	of the new community hall in	garage and the second
occupied by a community	Lam Tin South Phase 8 by ASD	Vi
centre, an estate office and a	is scheduled in 9/2002. The	
post office. Upon the	site availability date will be	
completion of a new	subject to completion of the	*
community hall in Lam Tin	fitting-out works.	*E >C 3t
South Phase 8, these facilities		
will be demolished to make		
way for redevelopment.	9	
8 4		(6
.1.3 The development will include a	1	N _30:
Small Household Development	· · · · · · · · · · · · · · · · · · ·	
(SHD) and a Residential Care	± = 6	6
Home for the Elderly (RCHE).	.5 (A)	
The rental block will address		×
the strong demand for small		
flats in the urban area. The	Ti.	
RCHE will be managed and	E	
funded by SWD.	1	

2. Evaluation of Master Layout Plan

	Approved by SPC	Master Layout Plan	Remarks
(Paper No. SPC 58/2000)		100	
2.2	Re-zoning & Public	2 11	
	Consultation	32	5
	4		
2.2.1	The site is currently zoned	The rezoning of land use from	
	"Government, Institution &	GIC to "Residential Group A"	35
	Community" (GIC) in the OZP	(R(A)) was approved by the	I.
	and the re-zoning exercise will	Town Planning Board (TPB) on	8
	be completed by 9/2001.	9/5/2001. TPB also advised to	, a .
	Strong local opposition is	improve the open space and	
	expected as the Lam Tin Area	recreational facilities for the	
	Committee has suggested to use	residents.	*
	the site as an open space in	2 gt	7.70 Fr 1
	view of the intensive housing	Kwun Tong District Council	8 H
	developments in Lam Tin.	was consulted on 19/7/2001.	DK
		A scheme of integrated open	9
		space with a footbridge	Α
		connecting Lam Tin Phase 4 to	0
		Phase 10, and finally to the	
		Lam Tin Playground above the	
		service reservoir was presented.	18
}	Traffic Noise Impact		
		W.	
17		A Traffic Noise Assessment by	- a - a
	8.	Maunsell Environmental	
	3.	Management Consultants Ltd.	
	r	was completed in 3/2000. It	
	≨:	estimated that Lam Tin Phase	1 (1
	•	10 would be exposed to road	
		traffic noise ranging from 57 to	
	1	67dB(A) by 2019 without any	1.00
		noise mitigation measures.	le:
			187

2. Evaluation of Master Layout Plan

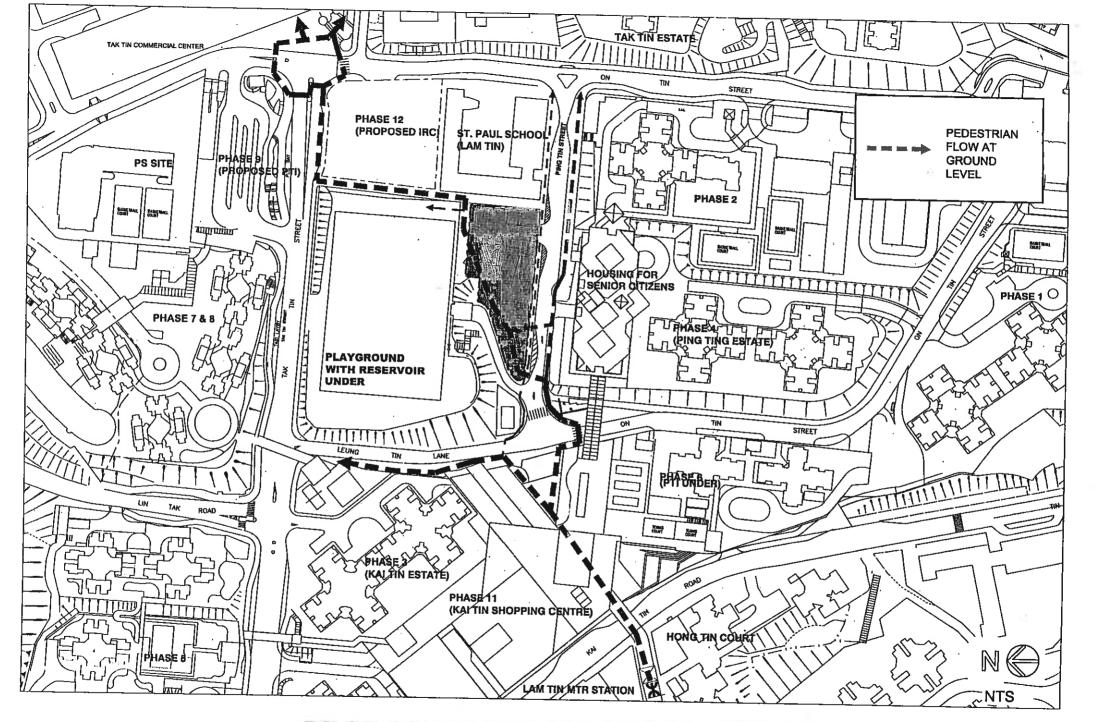
Approved by SPC	Master Layout Plan	Remarks
(Paper No. SPC 58/2000)		(A)
2.3 <u>Traffic Noise Impact</u>		
-		
	No noise mitigation measure is	
	therefore required at SHD	
	façades which do not exceed	4.
	the traffic noise limit 70dB(A).	m w
6	However, noise levels for the	
(5)	RCHE will exceed the	N 10
	recommended limit of 55dB(A).	- 20
	Air conditioning with	
	well-gasketted windows (noise	
s " a	insulation) would be provided	
	for the RCHE.	57 16
11 X x		20 66
4 Land Matters		
2	The site is entirely within the	
	existing Vesting Order	a #
	boundary of Lam Tin Estate.	8
	· I	
× * **	Between Phase 10 and Lam Tin	
	Playground, there is a strip of	
	land allocated to the Water	50
	Supplies Department (WSD)	
V*	but currently managed by HD.	
*	It was clarified and agreed with	
9	WSD that landscape design of	
	the strip of land should be	
	incorporated into Phase 10	**
	overall design.	n V
	12 C	
	1	

3. Development Parameters

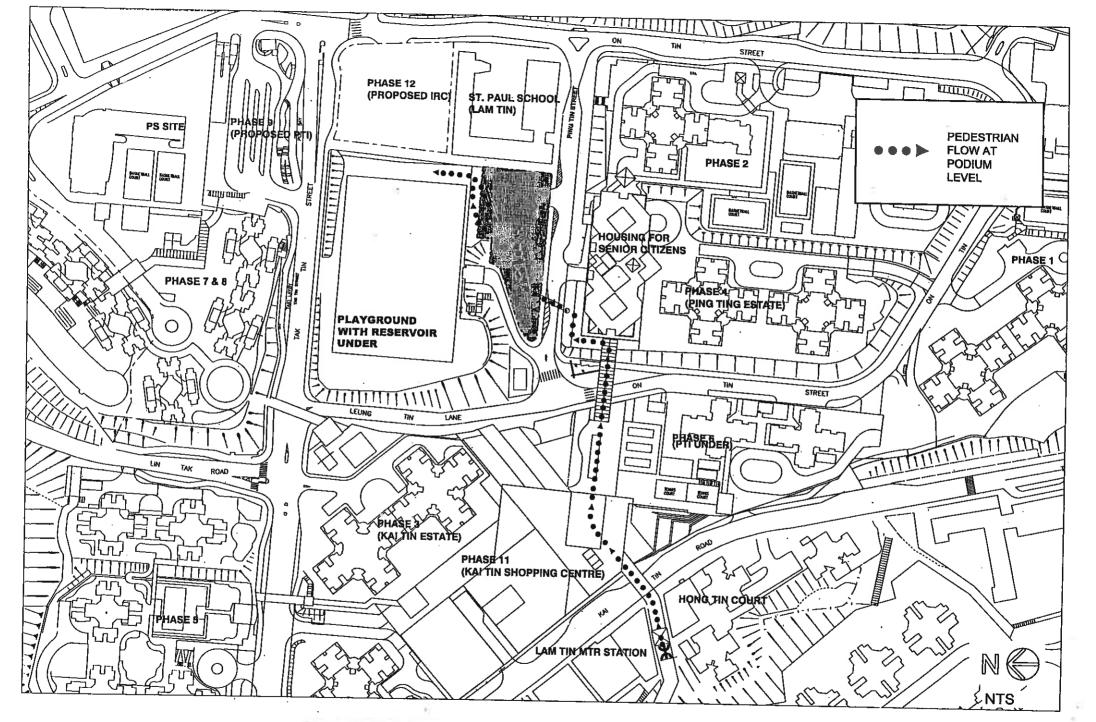
Approved by SPC			M:	aster Layou	ut Plan	Remarks	
	(Paper No.	SPC 58	/2000)		•		
3.1	Site Area					· ·	
	Gross Site	Area: 2,5	500.00m^2	Gross Si	te Area: 2,5		
	25			İ			
3.2	Proposed I	Iousing 7	Гуре				
	PRH			PRH - S	mall House	hold	
	17			Develop	ment (SHD))	
				_		(4)	1/
3.3	Plot Ratio		_			-	
	Domestic (Domestic	GFA: 15,3	361.36m ²	
	Domestic P	P.R.: 5.95		Domestic	P.R.: 5.99		- K
				_	•		o 10
3.4	Design Pop				(9)		40
//8	Population:	506	34 11 %	Population	on: 592 (SI	Đ)	W. ***
	C ₂ 2				200 (R	CHE)	
		- VC					12
3.5	Flat Numbe						0
	Total No. o	f Flats: 2.	52	Total No. of Flats: 282			The increase of 30 no.
	TS1 - 4 (TS1						domestic units is mainly
	Flat Type	No.	<u>%</u>	Flat Type		<u>%</u>	due to the gained area as
	1P/2P 2P/3P	65	26	1P/2P .	71	25.2	a result of the exempted
	1B	143	= 57	2P/3P	147	52.1	GFA under the recently
	2B	33	13	1B	46	16.3	issued Practice Notes:
	Total	11	4	2B	18	6.4	
	Total	252	100	Total	282	100	Joint Practice Note No. 1 =
							Exempted GFA for wider
					•		corridors and lift lobbies;
	12					g 81 v	Joint Practice Note No. 2 –
						1.8	Exempted GFA for
27							non-structural pre-fabricated
					(4)		external walls; and
				P.,			PNAP No. 27 – Exempted
			W				GFA for provision of better
					·		lift service.

3. Development Parameters

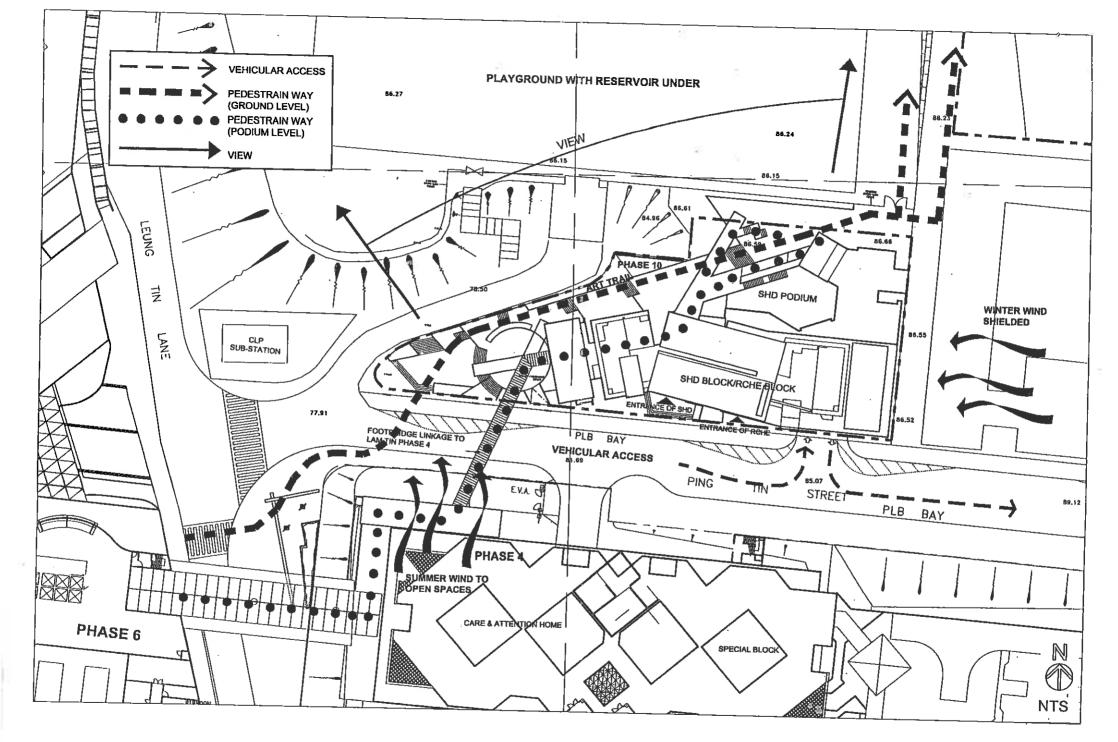
1	Approved by SPC	Master Layout Plan	Remarks
	(Paper No. SPC 58/2000)		Acmarks
3.	6 Parking Provision		
3.	6.1 <u>Private Cars</u> 15 nos.	Private Cars 15 nos. of private car parking spaces already provided in Lam Tin Phase 4.	The private car parking spaces are provided in the adjacent Lam Tin Phase 4. The overall
3.6	6.2 <u>Loading/Unloading Bay</u> As required.	Loading/Unloading Bay 1 no. (1 space per block)	parking ratio for the rental portion of whole of Lam Tin Estate
3.6	As required.	Ambulance Parking 1 no.	(including Phase 10) is about 1:14, which is the higher end of the
3.6	.4 · <u>16-seat Van</u> As required.	1 no. (1 space for RCHE)	standards put forward in the 2 nd Car Park Demand Study.
3.7	Community/Welfare Facilities 1 no. RCHE	1 no. RCHE with 200 bed-spaces	
3:8	Retail Provision Nil	Nil	
3.9	Local Open Space 1m ² per person	Approx. 1,100 m ² provided	



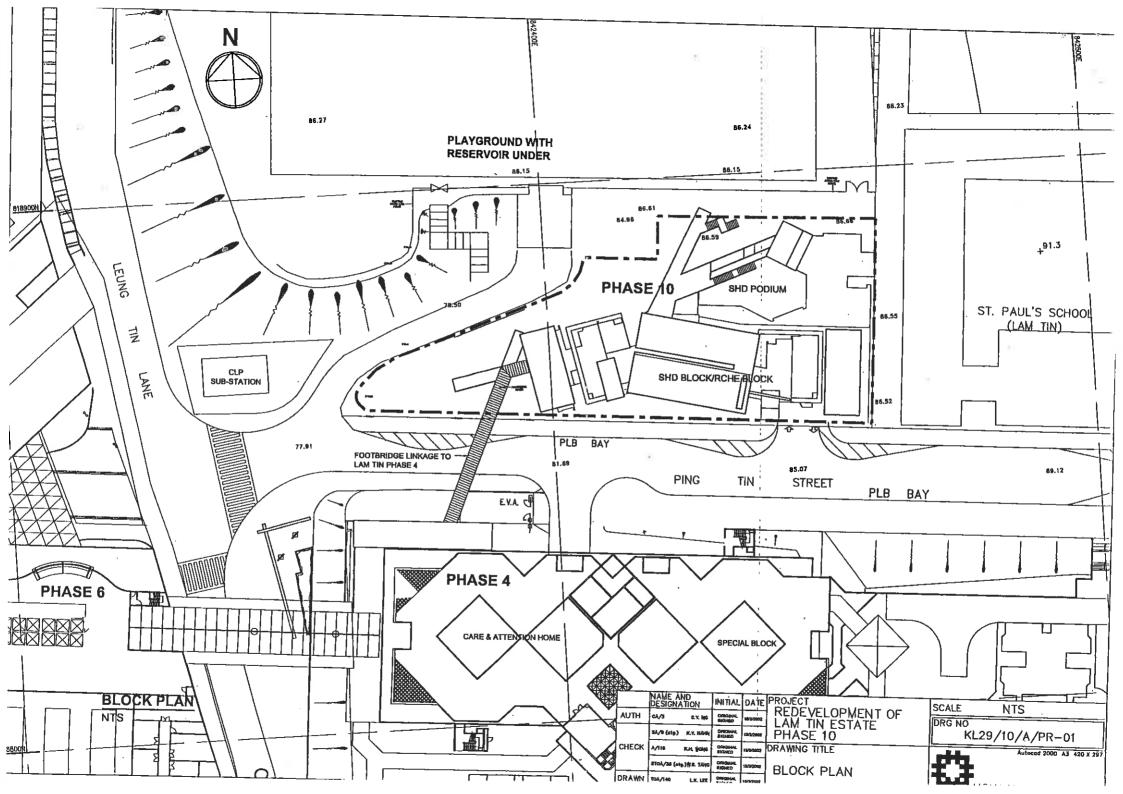
PROPOSED PEDESTRIAN CIRCULATION (GROUND LEVEL)

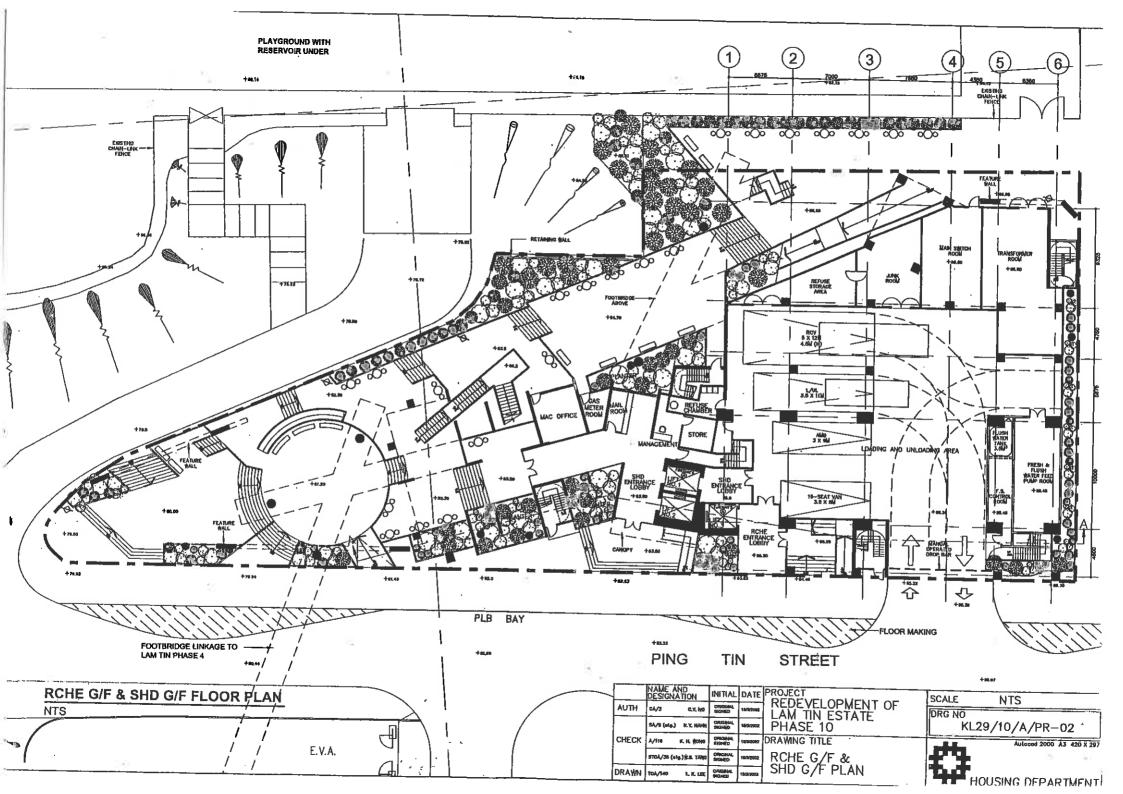


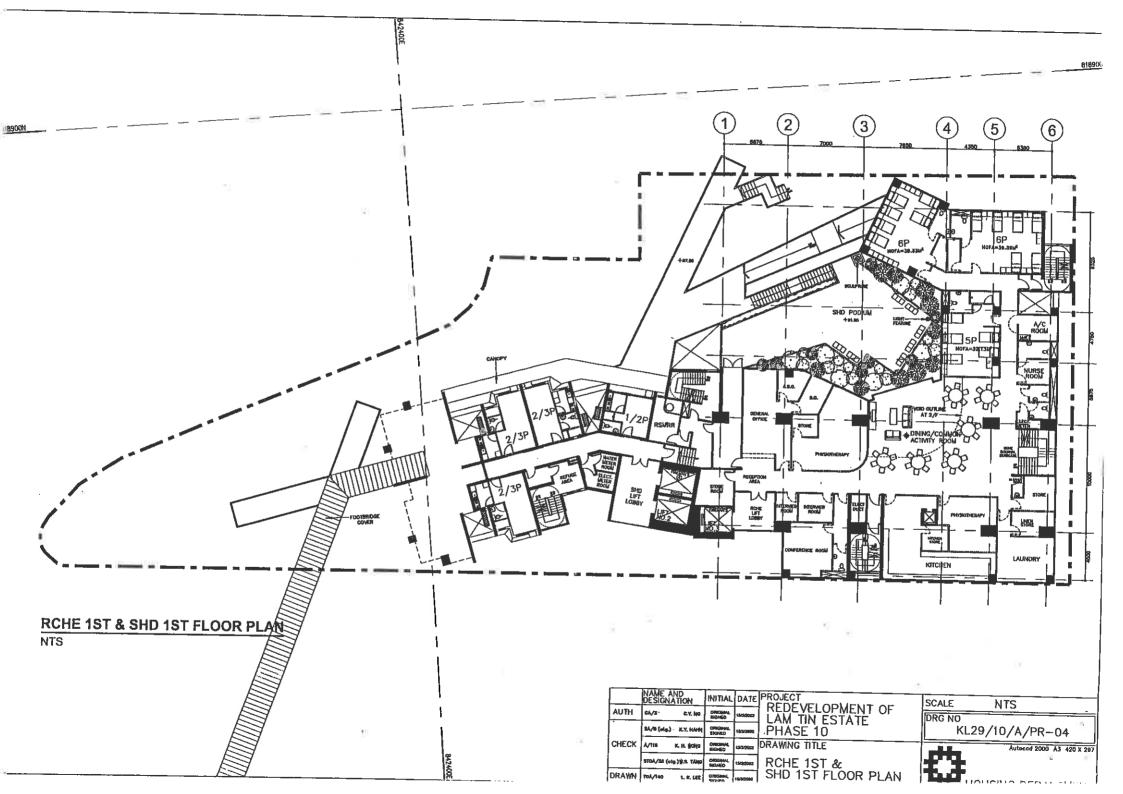
PROPOSED PEDESTRIAN CIRCULATION (PODIUM LEVEL)

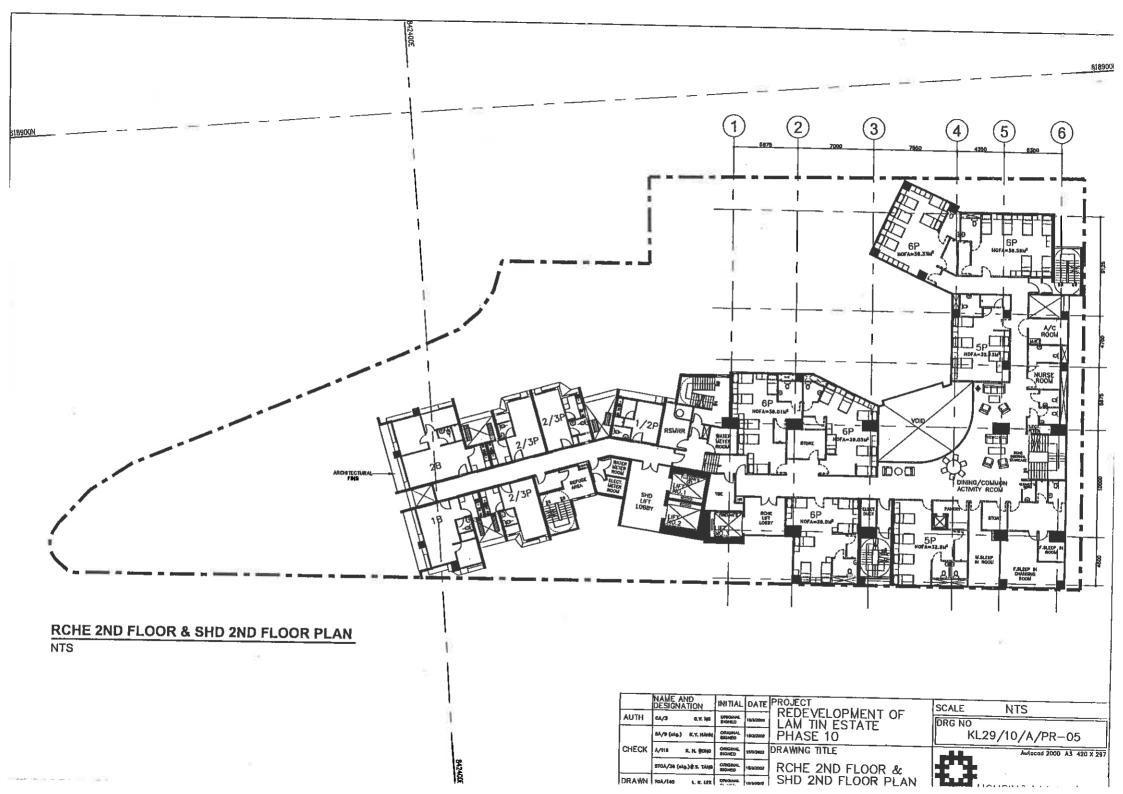


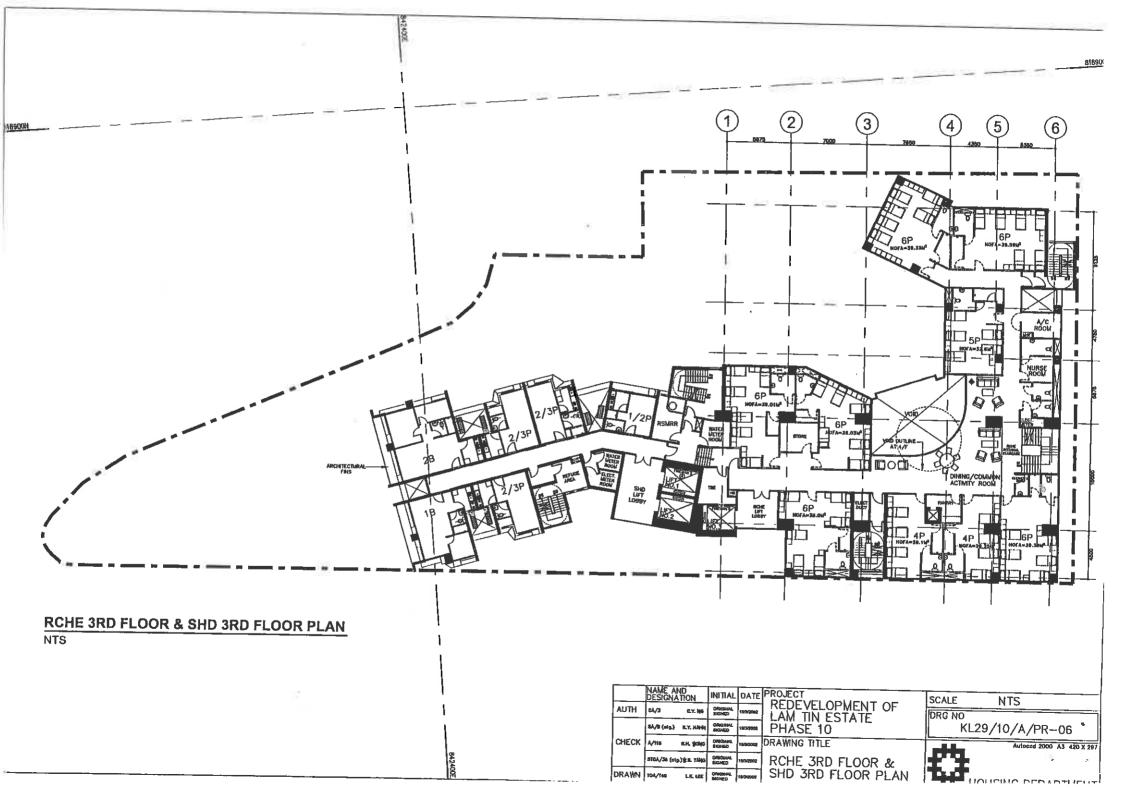
SITE LAYOUT PLAN

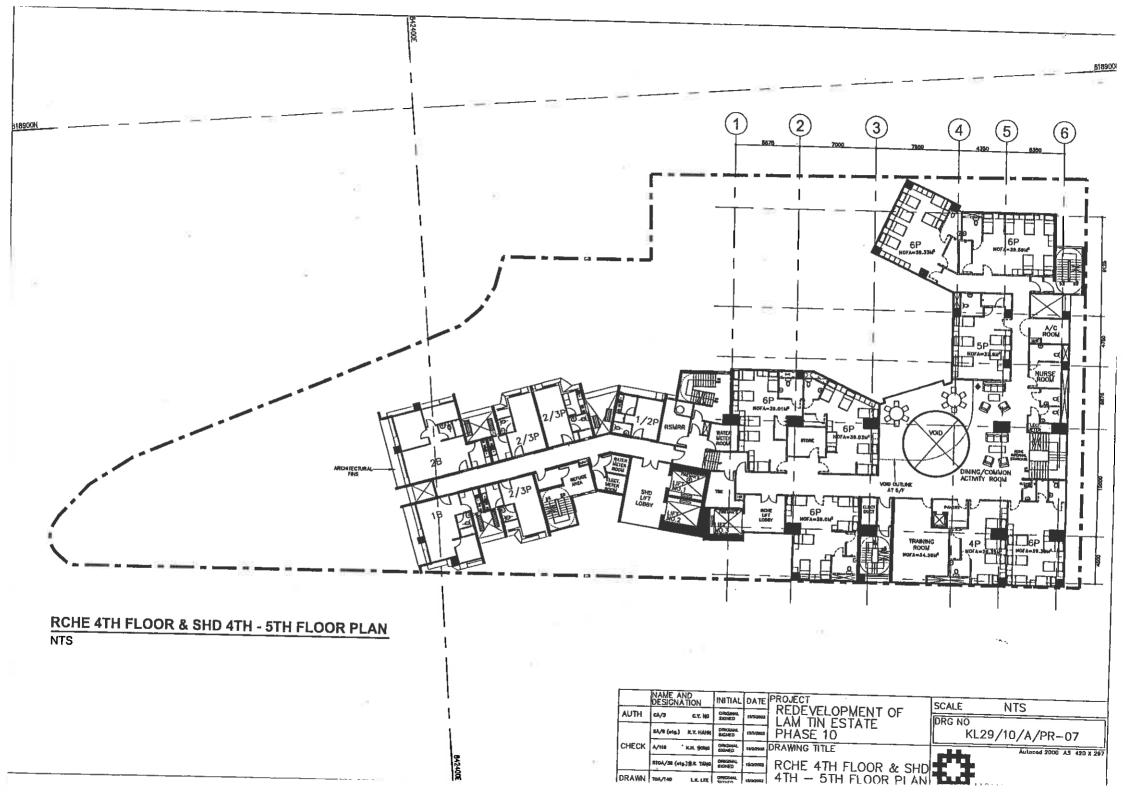


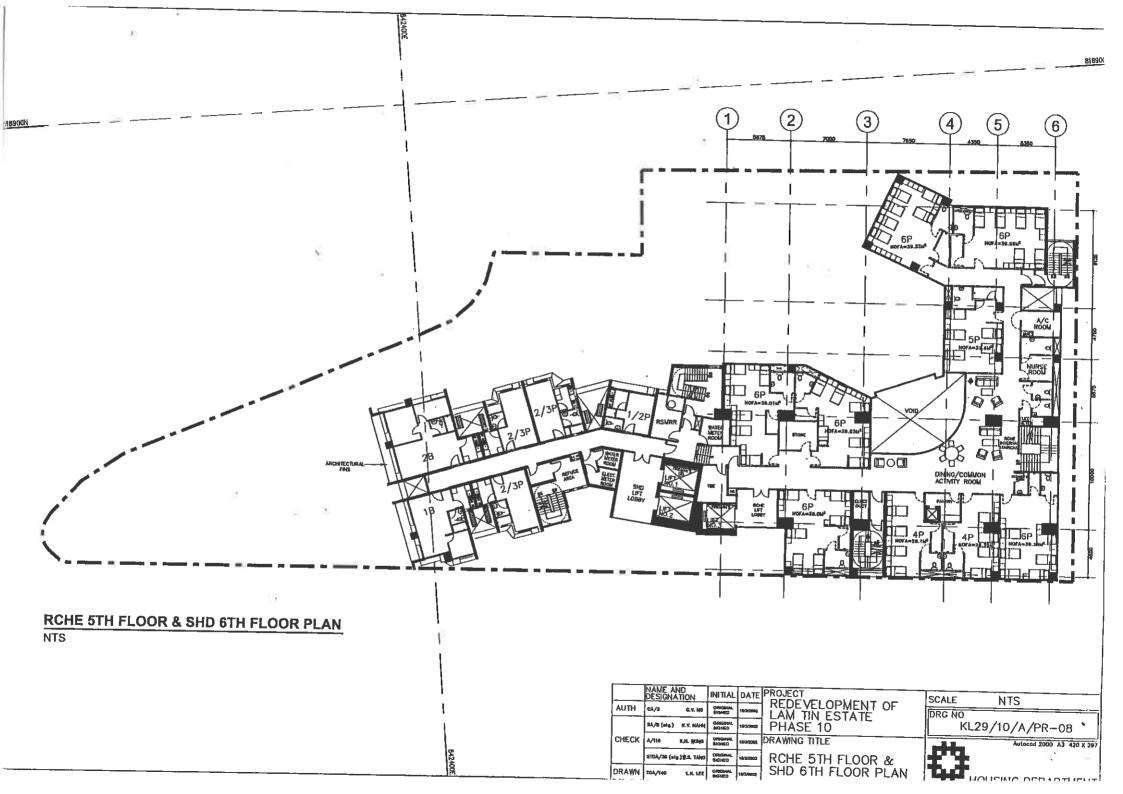


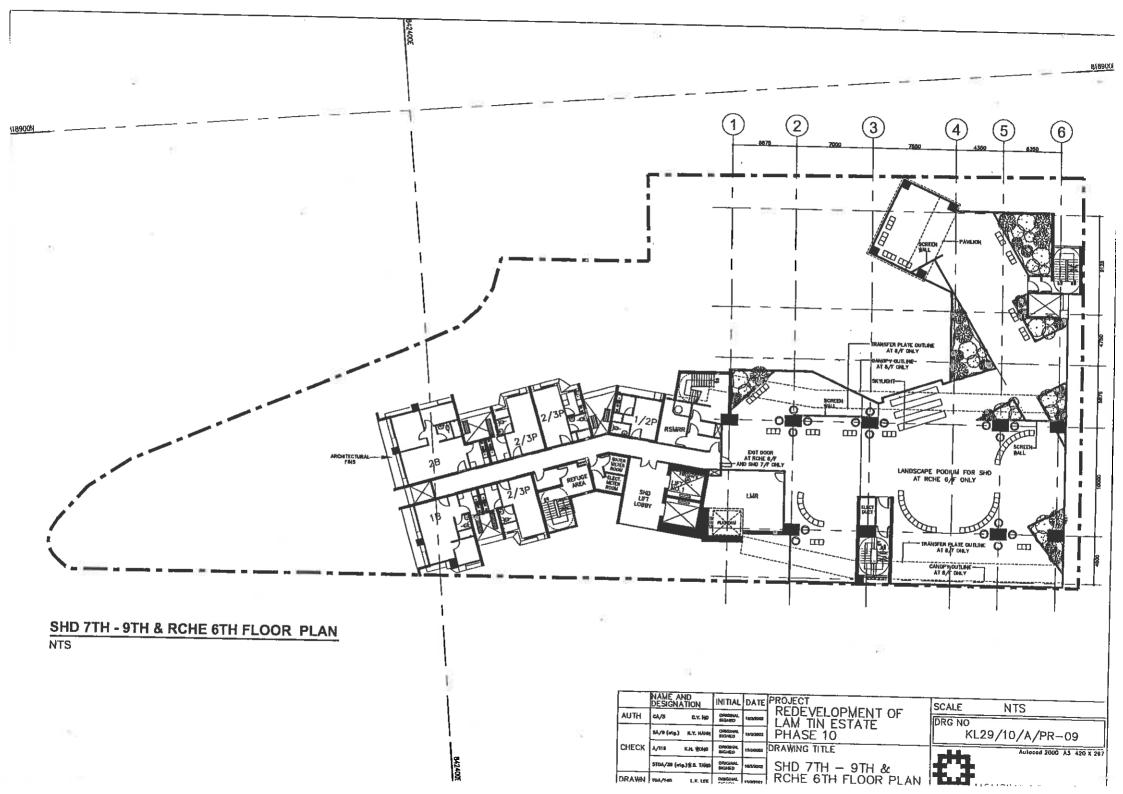


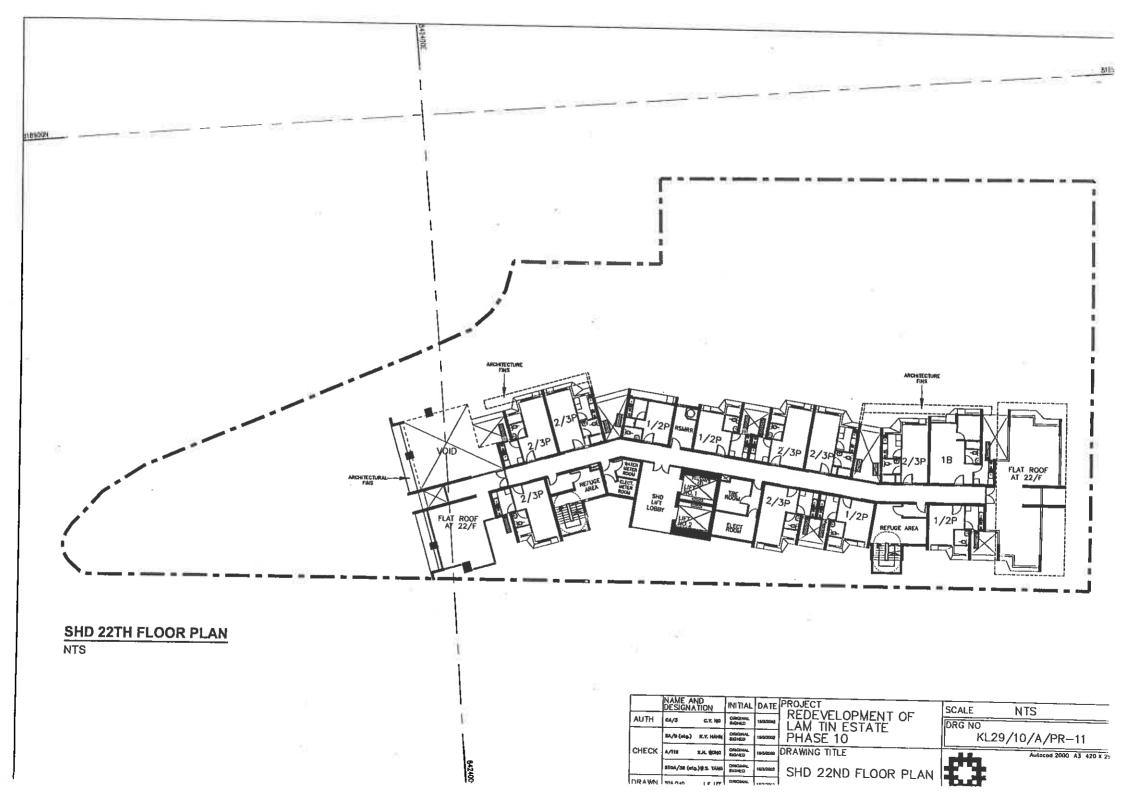


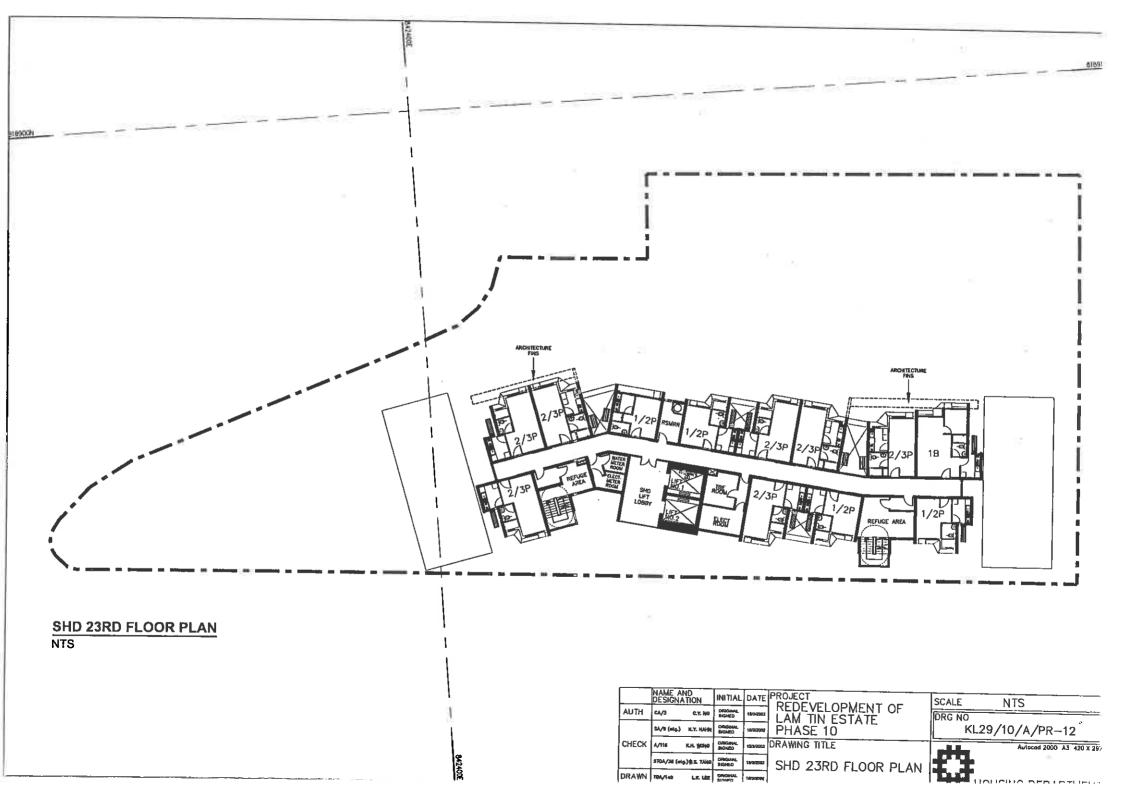


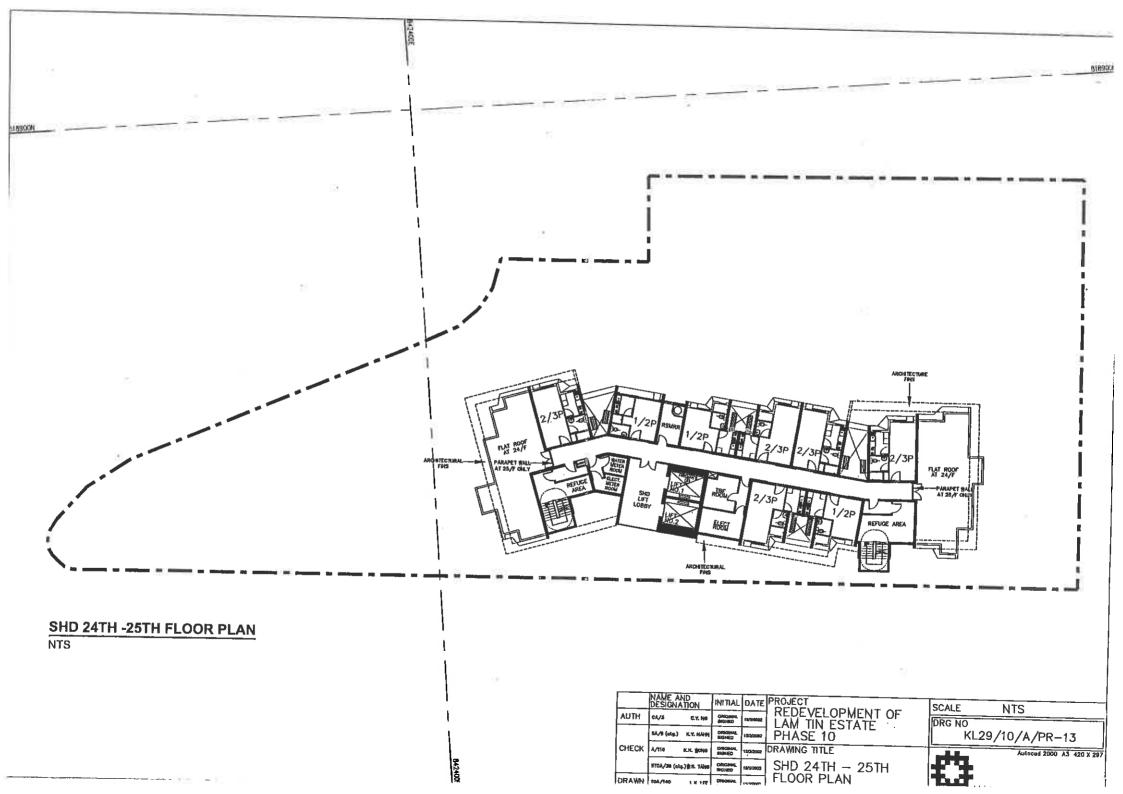


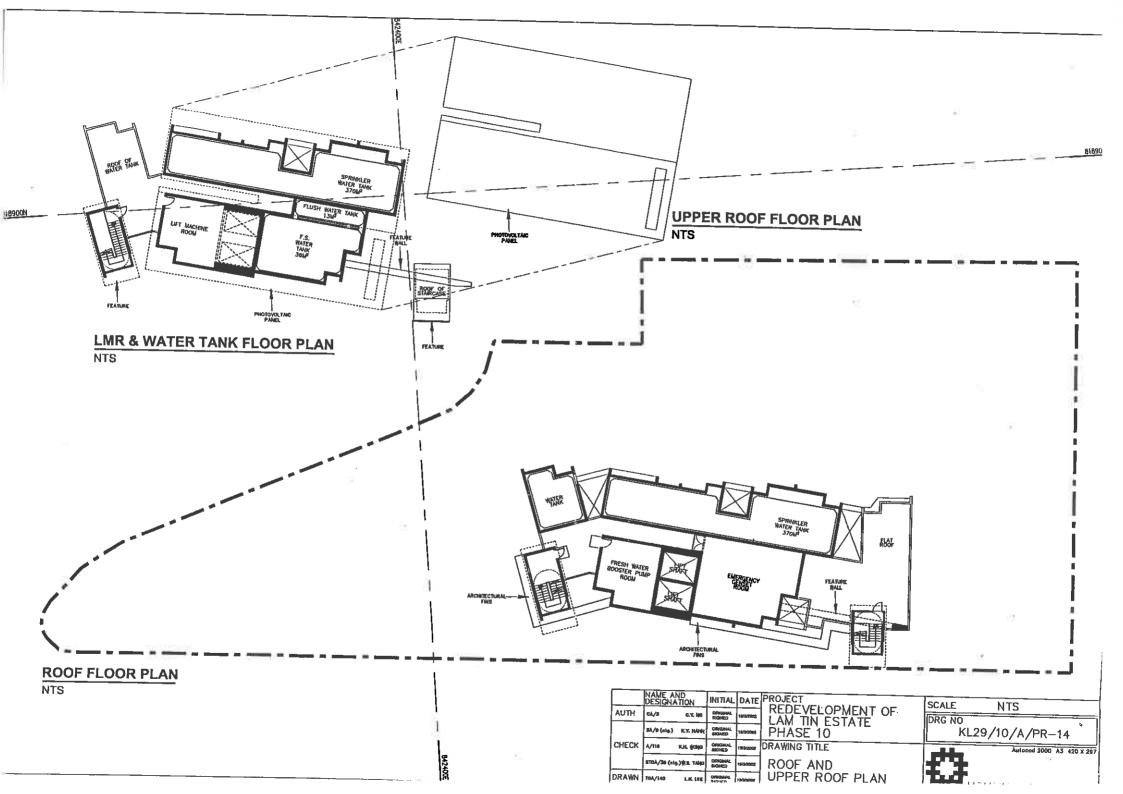


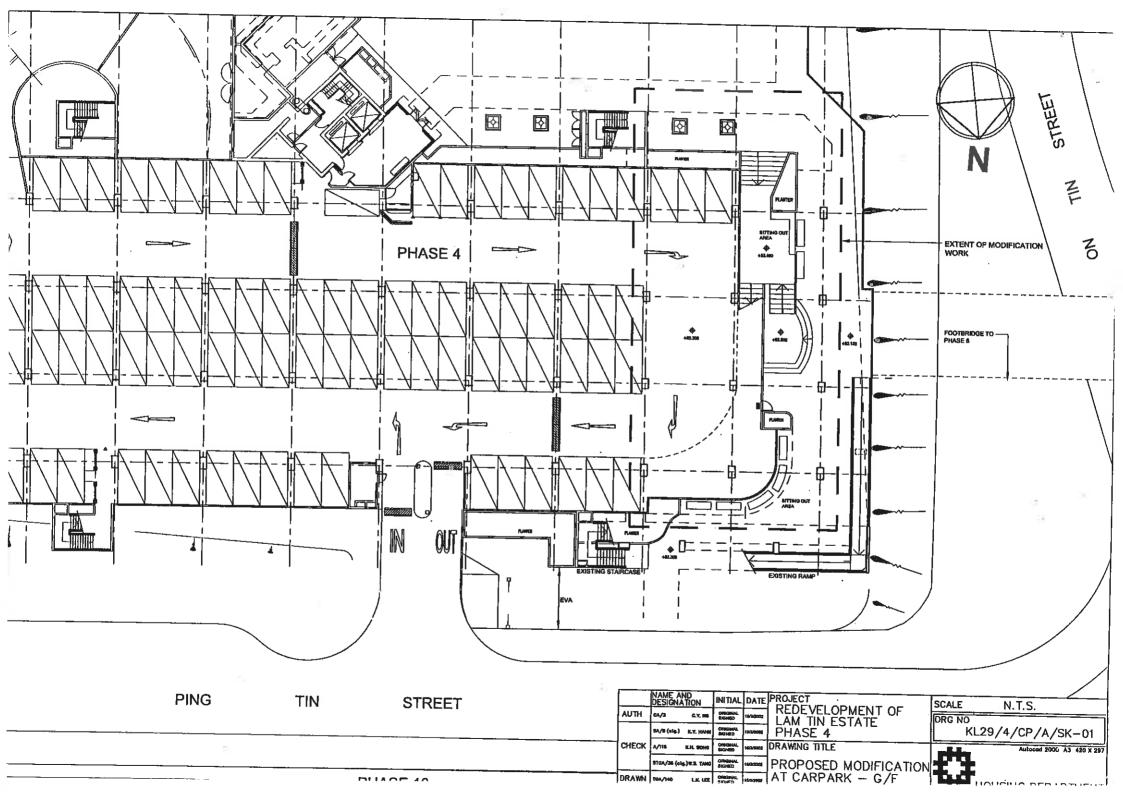


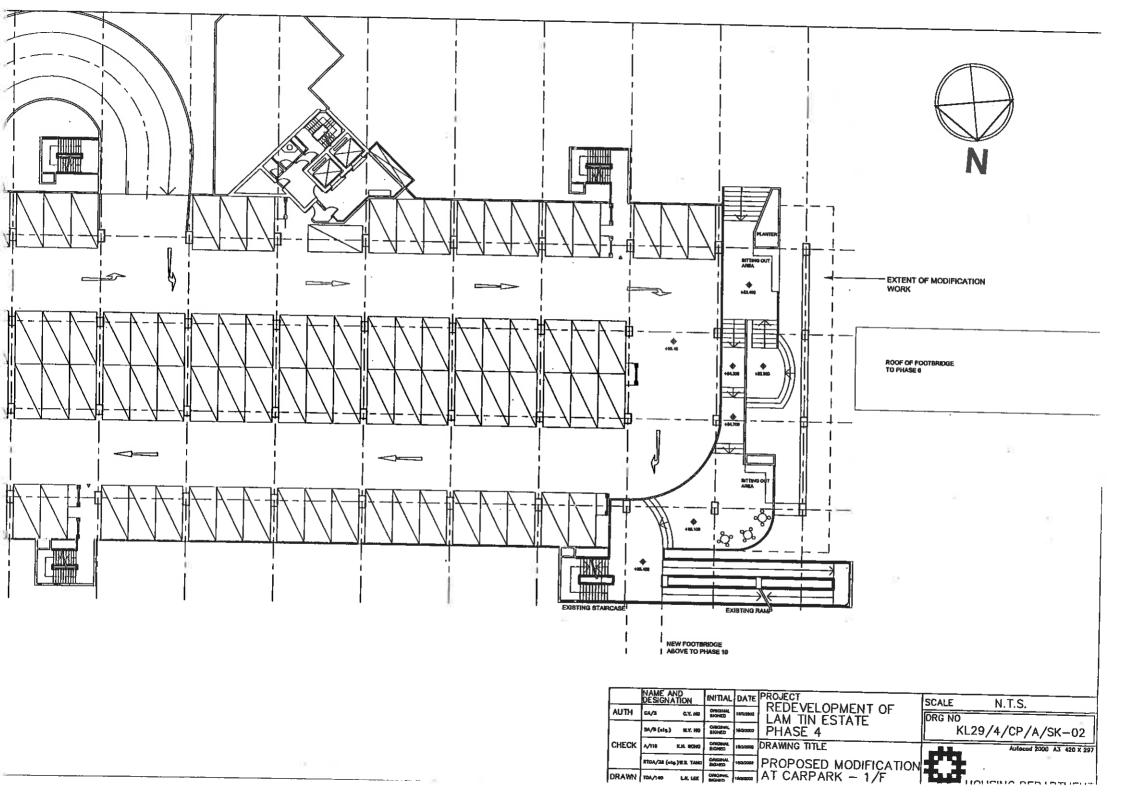


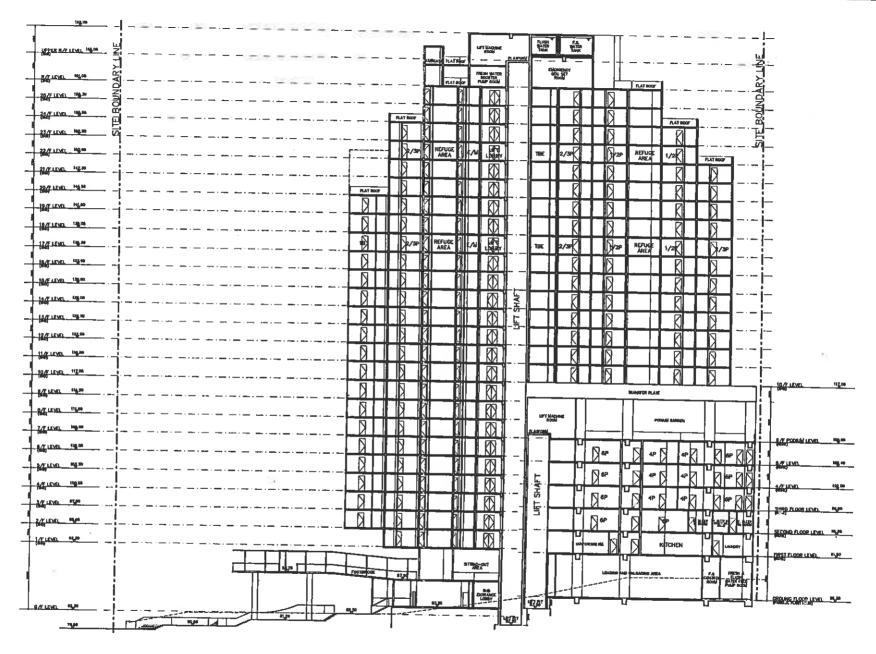








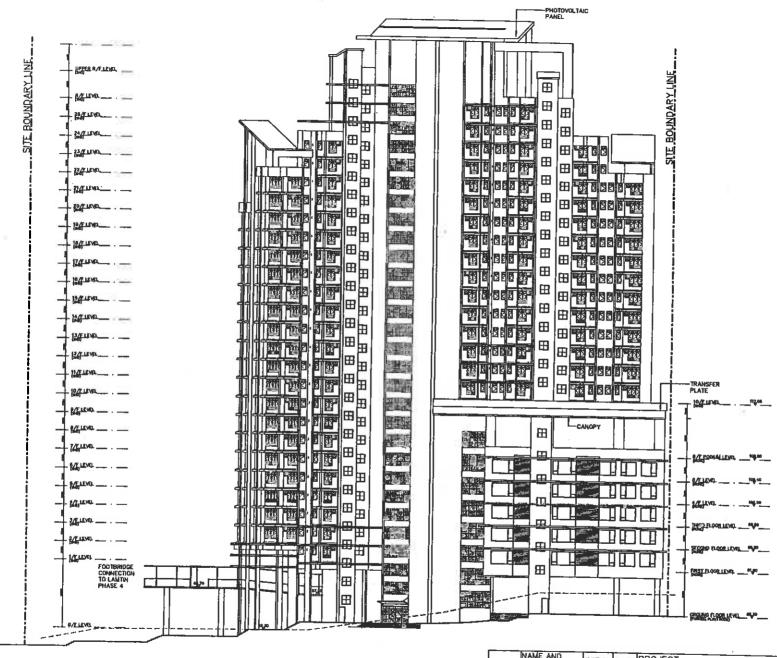




SECTION A-A

N.T.S.

	NAME AND DESIGNATION	INITIAL	DATE	PROJECT	SCALE N.T.S.
AUTH	EY\3 C.F.HR	OFRIGHAL SKINED	15/0/2002	REDEVELOPMENT OF LAM TIN ESTATE	DRG NO
	SA/0 (utg.) ICY, HAISI	ORIGINAL EKONED	18/0/2002	PHASE 10	KL29/10/A/PR-15
CHECK	A/118 KH YONG	DRIGHMA. SIGNED	18/3/2002	DRAWING TITLE	Autocod 2000 A3 420 X 29
	\$10A/36 (elg.) LS. TANG	ONGUM. SIGNED	16/3/2002	SECTION A-A	
DRAWN	TOA/140 LILLER	CONSCIENCE SUCCESSORY	19/3/2002	and the A	HOUGHD DED LOTTE

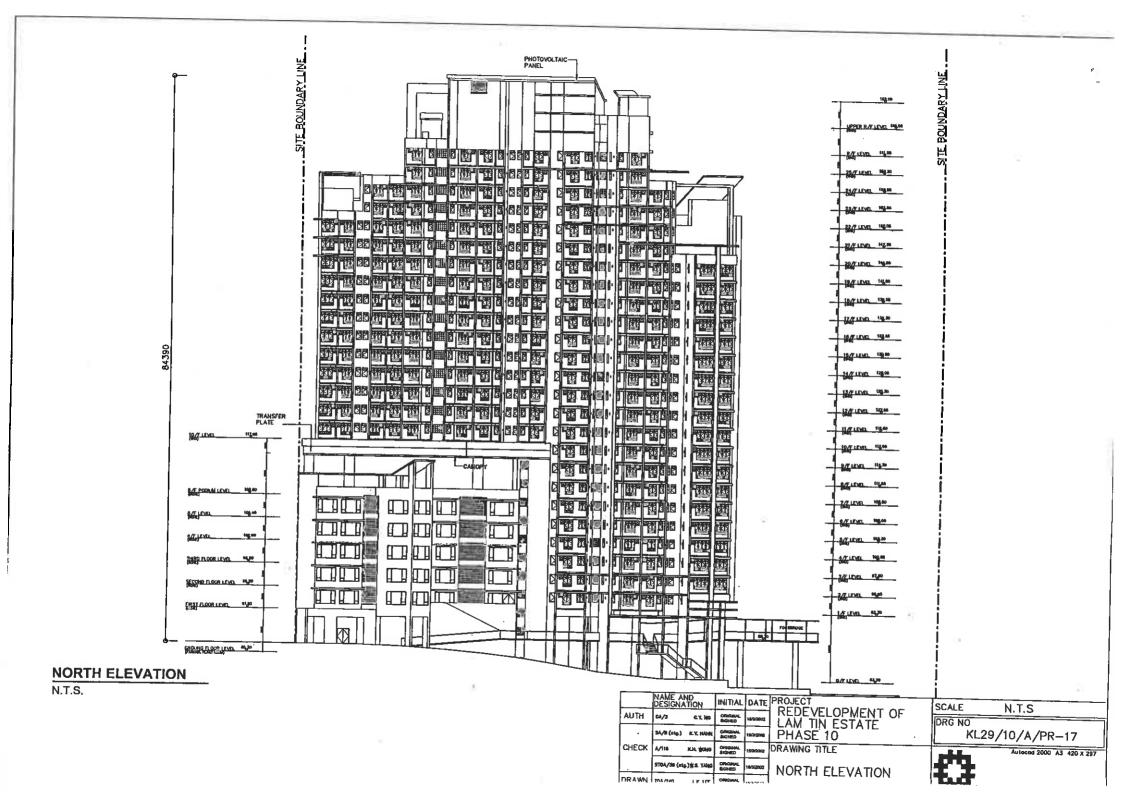


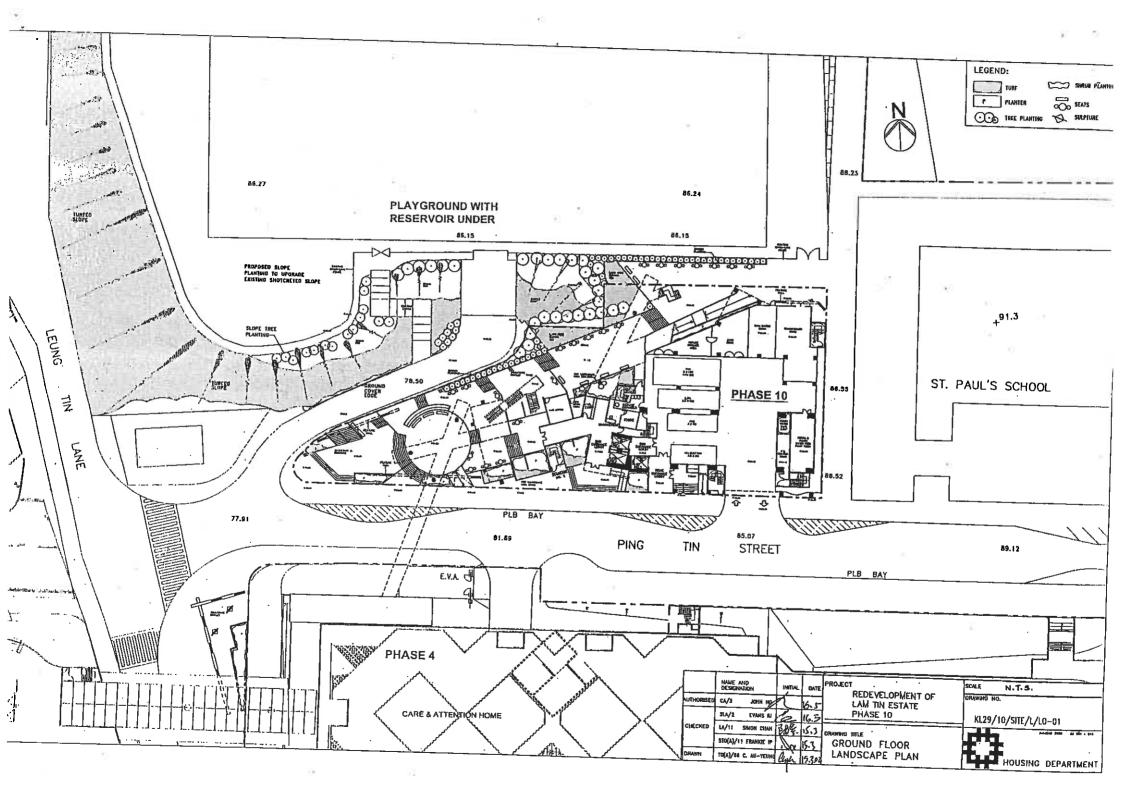
SOUTH ELEVATION

N.T.S.

	NAME AND	_	_	
	DESIGNATION	INITIAL	DATE	PROJECT
AUTH	C4/3 C.Y. He	ORIGINAL SIGNED	1571/8002	REDEVELOPMENT OF
	SA/B (etg.) ILY, HANN	OPEGINAL BIONED	15/3/2002	PHASE 10
CHECK	A/116 K.H. YKONG	DRICHNAL SKINED	15/2/2012	DRAWING TITLE
	STOA/34 (olg.) N.S. TANG	ENGINED CHRONING	15/8/2002	SOUTH ELEVATION
DRAWN	10A/140 LIC LEE	OPERAL.	180/2003	SOO III LLLVA HON

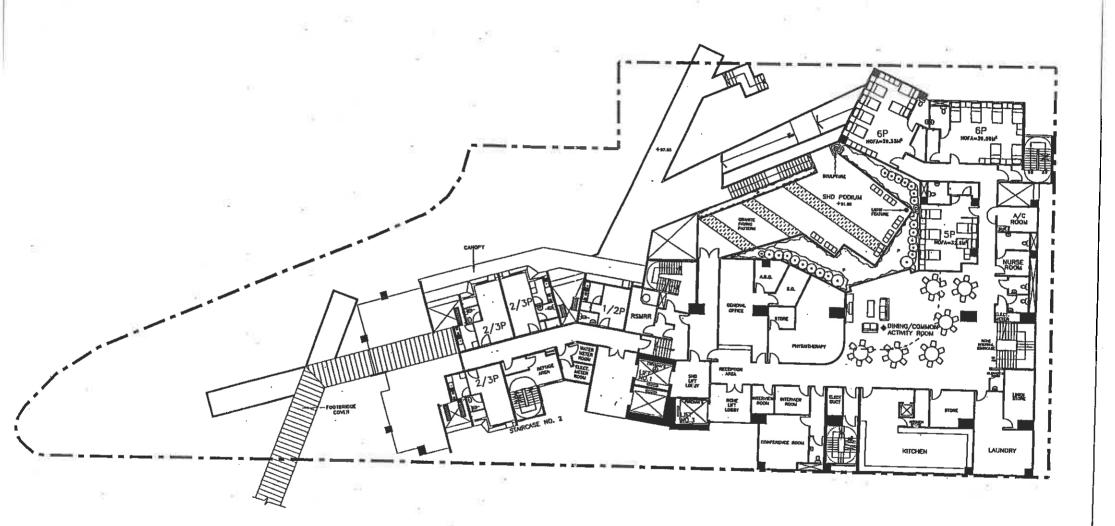
SCALE	N.T.S
DRG NO KL2	9/10/A/PR-16
#	Autocad 2000 A3 420 X 297











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APPROPRIED	CV/3 JOHN 6	·s/I	6.5	1
	SLA/2 EVANS	u /	16 3	
Officers	LA/11 STHOM CH	u 13/2	163	DIN
	STO(A)/11 FRANKE	a Da	15.3	
MINIS	TO(A)/107 W.W.CHU	بارا اس	1/1 1	

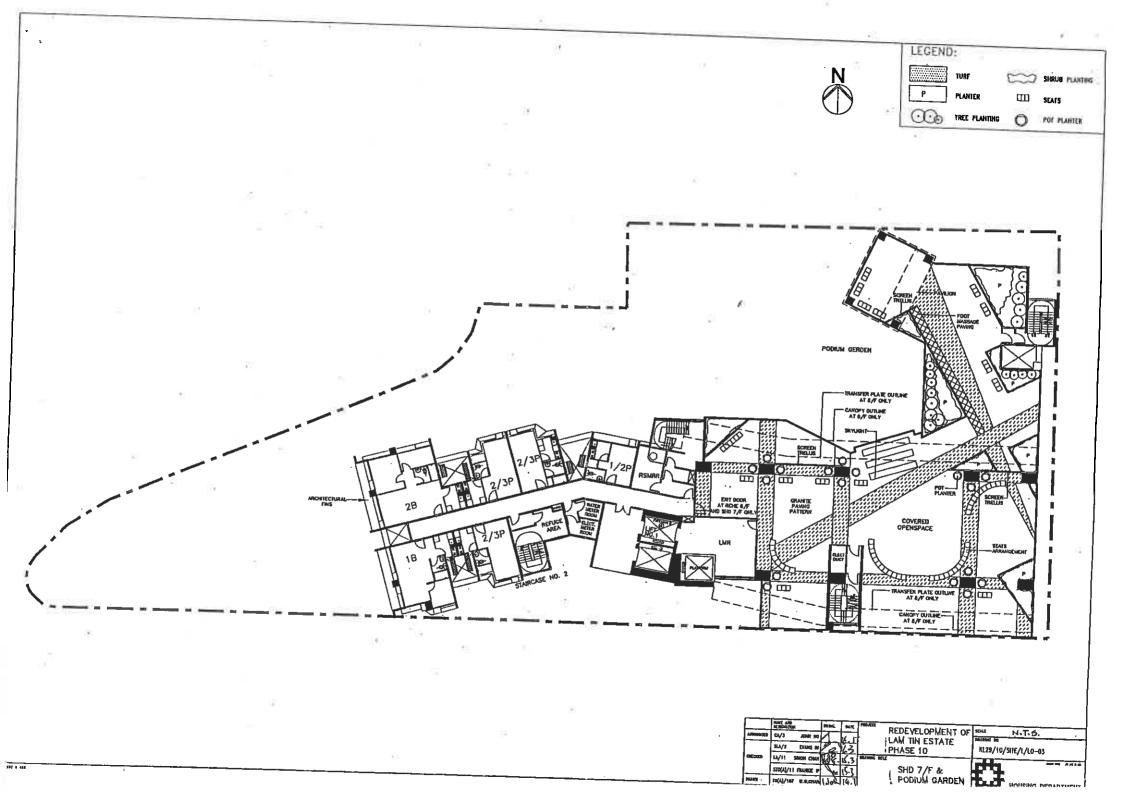
REDEVELOPMENT OF
LAM TIN ESTATE
(PHASE 10

KL29/10/SHE/L/L0-02

SHD 1/F & PODIUM GARDEN

HOHERIC REPARTS

N.T.S



REDEVELOPMENT OF LAM TIN ESTATE PHASE 10 VIABILITY STUDY OF PHOTOVOLTAIC SYSTEM

1) Photovoltaic (PV) system

PV system is a green power for daytime operation. There are two main types of PV system (a) remote system with back-up battery; and (b) grid-connected system without battery and backed-up by Power Company's supply grid. Installation cost and maintenance cost of grid-connected system are less and is more beneficial to the environment. Such system is designed for this project. On sunny days, the PV system produces electricity for the load. On cloudy days and at night, electricity is drawn from the Power Company's grid system. No battery is required for storage of electricity. However, under the monopoly control of local power utility company, connection to grid requires the consent of the power companies. Discussion with the Power Company would be made in due course.

2) Electricity generation and building energy demand

Public lighting is one of the major electricity demand of the development. Its continuous electricity demand characteristic is suitable for PV connection. As sunlight can be borrowed at the staircase and lobby, the lightings there are designed to be controlled by photocells whilst the corridor lighting is selected for connection to PV system.

It is estimated that 160 no of PV panels would be installed. The electricity generated at peak is sufficient to provide power supply for the corridor lightings at all floors. In Hong Kong, the roof is the best location for installing PV panels insefar as efficiency is concerned. Full ventilation at both sides of the PV panel is provided for better efficiency of the panel.

3) Payback period estimation

Installation cost: \$1,400,000.00

Annual electricity generation : 32 MWH (assume 4.5 hour of sunlight per day round the year)

Annual saving of electricity bill : \$32,000 (assume power company agrees grid connection and electricity bill at \$1 per kWH)

Payback period: 44 years (assume maintenance cost is negligible)

REDEVELOPMENT OF LAM TIN ESTATE PHASE 10 VIABILITY STUDY OF PHOTOVOLTAIC SYSTEM

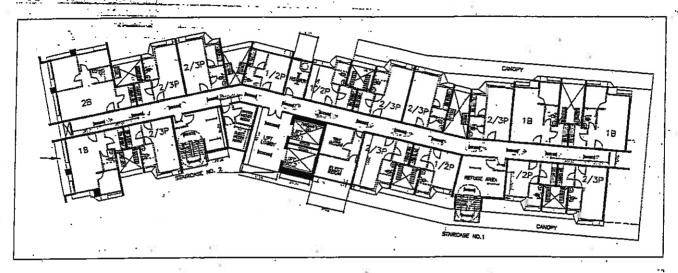
4) Technical details

The PV panels gather solar energy in the form of sunlight and convert it into DC current (direct current). The more sunlight they receive, the more electricity they produce. The power conversion system (PCS) converts the DC current to AC current (alternating current) which feeds the corridor lightings. The Power Company's grid connection is also of AC current so direct connection of the PV supply to the grid is feasible. At night or cloudy days when the PV panel cannot generate electrical power, the corridor lightings can draw electrical power directly from the Power Company's grid connection. No changeover is required.

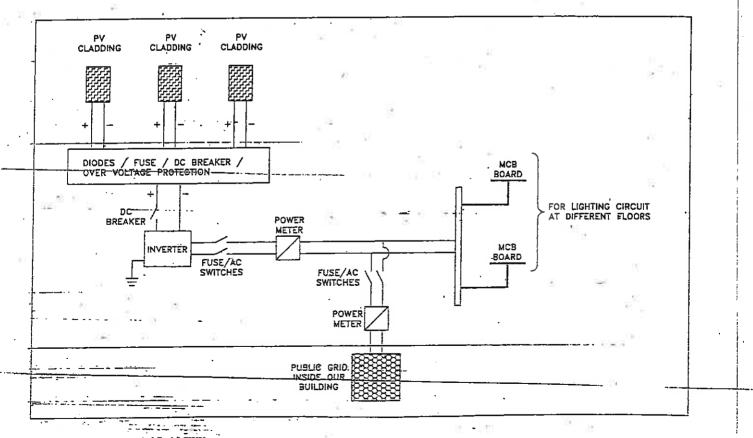
Maintenance of PV panels is minimal. In fact, most PV panel supplier can provide guarantee of about 25 years for PV panels.

Typical corridor lighting layout and a simplified schematic wiring diagram of the PV system are shown in the attached sheet.

Typical corridor lighting layout connects to PV panels (G/F to 25/F)



Schematic diagram of the grid-connection system



PROPOSED PROJECT DEVELOPMENT PROGRAMME - REDEVELOPMENT OF LAM TIN ESTATE PHASE 10 (As at 05/02)

DEVELOPMENT PARAMETER, CONCEPTUAL LAYOUT, FINANCIAL MARIETY	7 8 9 10 11 12	Letter Compare		if the Sale and	1.00			T.A., (b)	IN ESTATE		10 (A3 at 0	13/02)	Ì
DEVELOPMENT PARAMETER,	. 0 0 10 11 12	16345678	9 10 11 12	1 2 3 4 5 6	7 8 9 10 11 1	1.2 3 4 5 6	7 8 9 10 11 15	2 1 2 2		antique () ()			alalalalar Alahisa.
CONCEPTUAL LAYOUT,				PDRC2 BC	DDRP			1 2 3	4 5 6 7 8 9 10 11	12 1 2 3 4	5 6 7 8 9 10 11	12 1 2 3	4
FINANCIAL, VIABILITY STUDIES & DESIGN	0.0			03/02 05/02	11/02			ĺ					
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CLEARANCE	PDRC1 SPC									1			
	08/00 09/00							 					
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DEMOLITION										ľ			
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	ļ				12/02	03/03 04/03	i	04/04		1	F. 0		12 months construction
			1		Tender out	Award Commence	medi	Complet			200		period including 1 mo for inclement weather
	1		- 1			10 10 10 10 10 10 10 10 10 10 10 10 10 1	(4) William	Hereit in					(according to the lates
BUILDING							12 MONTHS			1			slandard lead lime).
	[T							 			
	1		ł		ļ.		12/03 Tender	03/04 at Award	04/04 Commencement			02/06	22 months construction
					- 1		-	V					period including 2 mon for inclement weather.
1							90	9			* 1 m	STATE OF THE PARTY	
			- 1		- 1					22 MONTHS			ľ

PDRC 1 SPC PDRC 2 BC DDRP		ENDORSE DEV. PARAMETER/ CONCEPTUAL LAYOUT/ COST CEILING APPROVE DEV. PARAMETER/ CONCEPTUAL LAYOUT/ COST CEILING ENDORSE MASTER LAYOUT/ PROJECT BUDGET APPROVE MASTER LAYOUT/ PROJECT BUDGET APPROVE DETAILED DESIGN
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SUMMARY OF SITE DEVELOPMENT & CONSTRUCTION COST PROJECT BUDGET NO.5

Project: Redevelopment of Lam Tin Estate Phase 10 (PHDP Code: KL29RR)

	COST HEADS	WORK ELEMENTS	BUDGET COS
_			(\$M)
(a)	Site Development Cost	Site formation	(#172)
		Demolition	- 3.581
		Sub-total:	3.581
(b)	Construction Cost (including contingency)	Foundation	7.429
		Building	123.017
		Modification Works to Lam Tin Phase 4 Carpark	2.939
		Other separate contracts	0.513
-		Sub-total:	133.898
	Other Project Cost (2% on (a) & (b))	Civil engineering and geotechnical studies, site investigation, material testing and the like	2.750
d)		Total Site Development and Construction Cost	4.730
_		(a) + (b) + (c):	140,229

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 June 2001 to December 2001 and 0.7 % per annum from January 2002 onwards.
- (2) Apportionment of the Construction Costs are in accordance with the existing cost apportionment guidelines set out in the Contract and Tender Procedures Manual (BCT).
- (3) The costs for softlandscaping works, utilities connections, diversion works by Government Department or Utility Companies, and minor works carried out specifically for the project, eg roadworks or slopeworks outside site boundaries under separate contracts to the project shall be grouped under Other Separate Contracts.
- (4) The fluctuation provisions shall be worked out based on the formula as shown the Guidance Notes for Standard Cost Yardsticks.
- (5) Development contingencies of <u>\$0.000</u> M for standard block superstructure and \$ 6,546 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 Costs.

Inclusions:

(1) This estimate includes costs of SHB, TS.and EW.

Exclusions:

- (1) Project Management Costs, e.g. professional services & overheads, consultant fees, and consultant site staff.
- (2) Costs of RCHE which are funded by SWD
- (3) Publicity cost, financing and legal costs/expenses, etc.

Assumptions:

- (1) Assumptions to be referred to notes of relevant portions.
- (2) Foundation design provided by HKHA on 26 February 2002 (Socketted H-pile and footing)

Basis of the Estimate:

(1) General floor plans provided by HKHA on 12 March 2002

Prepared by : Sharifa Chan (Widnell Limited)

Date : 24 April 2002

SUMMARY OF SITE DEVELOPMENT & CONSTRUCTION COST BUDGET NO. 5

				- DDr		ORTION		Total		LOTTERY FUND	Total
				PRH	אט	GN	Others	(incl. fluctuatio	<u> </u>	RCHE	(incl. fluctuation)
CFA	of Cost Portions (m2)			16,030	21			16,051	7 [4,120	20,171
	COST ITEMS								7 7		
A.	Cost Estimate At June 01 (Excluding Tender Price Inflat	ion						\$,000	i I		\$,000
1.0	Site Development Cost	<u></u>							7 [
	1.1 Site Formation Contract			1					1		
	1.2 Demolition Contract			1	-		J	**		. 1	
0.5	Construction Costs			3,576	5			3,581	1 1	919	4,500
	2.1 Foundation Contract					i i			1 1		1
				7,487	9		1	7,496	1 1	1,924	9,420
	2.2 Building Contract 2.21 Building (excl. building services)			1	ļ	1			1 1	.,	7,420
	2.21 Building (excl. building services) 2.22 Building Services			80,274	80			80,354		15,981	04.205
	2.23 Transfer Structures			19,853	26	ł	1	19,879		3,486	96,335 23,365
	2.24 External Works for Specific Businesses			2,159	3			2,162	1 1	555	23,303
	2.25 External Works for commonly shared elements			30.041						- 1	2,727
	2.26 Automated Refuse Collection System			20,841	27	1	1	20,868		4,497	25,365
	2.27 Modification works to Lam Tin Phase 4 Carpark			2,941	4					-	
	2.3 Other Separate Contracts (incl. Soft landscape)			1		ļ		2,945	1 1	756	3,701
_				513	1		<u> </u>	514	JL	77	591
ost	Estimate At June 01 Price Level		(A)	137,644	155		}	137,799		28,195	165 004
•.	Cost Estimate At June 01						 -		-l -	20,173	165,994
	For Tender Price Inflation [Cost in Item (A) plus Cost x (v), (w), (y) or	(z)]	1			1 :		1 1		
.0	Site Development Cost	_(Total 9	S'M) .								
	1.1 Site Formation Contract 1.2 Demolition Contract	S N/A					1 1				1 1
		\$ 3.58	1	3,576	5			3,581	\perp	919	4.600
.0	Construction Costs			l	- 1		1 1	-,			4,500
	2.1 Foundation Contract	\$ 7.42	9	7,420	9		1 1	7,429			
	2.2 Building Contract	\$ 123.0	17]]			1 1	1,427	1	1,907	9,336
	2.21 Building (excl. building services)	-	••	80,114	80				1 1		i
	2.22 Building Services	-		19,813	26] !	80,194	1 1	15,949	96,143
	2.23 Transfer Structures	-		2,155	3		1 1	19,839 2,158		3,479	23,318
	2.24 External Works for Specific Businesses 2.25 External Works for commonly thered elements	-		-	-		1 1	2,136	1	554	2,712
	2.25 External Works for commonly shared elements 2.26 Automated Refuse Collection System	•		20,799	27		1 1	20,826	1 1	4,488	25,314
	2.27 Modification works to Lam Tin Phase 4 Carpark			-	-		, ,	0	1 1	,,	0
	2.3 Other Separate Contracts (incl. Soft landscape)	2.939		2,935	4			2,939	1 1	754	3,693
	Estimate Projected	\$ 0.513		512	_ !		i i	513	1 1	77	590
	pposed Dates Of Tenders	\$ 137.47	9 (B)	137,324	166				1 -		
	of Contract		(1)	137,324	155			137,479	J [_	28,127	165,606
	ormation					Ten	der In Dates	a aa.	Adjustm	ent for months after J	
	ition					07/02	Months x Months x		_0_Mo	nths x 0.7 % / 12 =	0,000 (
und	ation (incl. cap)					01/03	6 Months			nths x 0.7 % / 12 =	0.000 (
uld)r	ng (for inflation adjustment, 'Other Separate Contracts'						··············)	-J.J78 T	M0	nths x 0.7 % / 12 =	(0.009)
	In Dates to be taken the same as "Building")					01/04	6 Months	· -3.3% +	25 Ma	nths x 0.7 % / 12 =	/D 000°
	for Cost Portions :									V. /0 / LZ =	(0,002)
	- Public Rental Housing	CP(SW	/D) - 9	Social Welfar	e Departmen	at Carner	UN		Pl-all Pr		
	- Residential Care Home for the Elderly	CP(HA	ND) - 1	Iome Affairs	Department	Camark	GN		Unaliocable		- External Works
ı	- Community Hall and HAD Offices	OCPEP	т . т	ublic Rental	U	, , , , , ,	TS			t Non-reimbursable structure	

* Construction Cost Budget No.5 (Domestic Blocks : Public Rental Housing Portion)

Project: Redevelopment of Lam Tin Estate Phase 10 (PHDP Code: KL29RR)

	Cost at June 2001 Price Level	No. of	Faur de d	Estimate Cost			
	(i)	Flat	Foundation		(Excl Caps)	TOTAL	
		Flat	(Incl Caps)	Builder's Works	Building Service	s	
1.0	Non-standard Blocks		<	\$,00	00.00		
a)	Small Household Block				(0)		
	25 IP/2P Flat/Unit 46 IP/2P Flat/Unit 57 2P/3P Flat/Unit 90 2P/3P Flat/Unit 46 IB Flat 18 2B Flat 282 41.22 m2 CFA per Flat/Unit 43.78 m2 CFA per Flat/Unit 51.94 m2 CFA per Flat/Unit 54.58 m2 CFA per Flat/Unit 73.38 m2 CFA per Flat/Unit 96.53 m2 CFA per Flat/Unit	25 46 57 90 46 18 282	7,130	76,451	18,908	10 2,48 9	
	Cost per flat x flat no. = Sub-Total (A) (Total CFA = 16,030 m2)		7.120	ľ	0.00		
(10th C1A = 16,030 m2)		7,130	76,451	18,908	102,489		
						(\$6,394/m2 CF (\$363,437per fl	
)	Development Contingency		<	\$,000	.00	>	
	All non-standard blocks and all standard elements other than superstructure (5%)		357	3,823	945	5,125	
	Sub-T	otal (B)	357	3,823	945	5,125	
						(\$320/m2 CFA (\$18,174per fla	
1	Total Cost of Domestic Block - Public Rental Housing		<	\$,000.	00	>	
	ortion at June 2001 Price Level = (A) + (B) including Provisions for Contract Fluctuations)		7,487	80,274	19,853	107,614	
						\$6,713/m2 CFA 381,611per flat	

Notes:

B Form 4 (22/09/00)

¹ Foundation cost is based on SE's letter of 26 February 2002 (Socketted H-pile and footing)

Construction Cost Budget No.5

(Unallocable Portion)

Project:

Redevelopment of Lam Tin Estate Phase 10 (PHDP Code: KL29RR)

				nated Cost		
Cost at June 2001 Price Level	CFA	Foundation	Building (Excl C		Building	TOTAL
	(m2)	(Incl.	Builder's Works	Building Service	, — · · · · ·	1
		Caps)		0.000.00	Caps)	
1.0 Ancillary Facilities in Domestic Block (G/F)				3,000.00 	>	1
(a) Ancillary Facilities (no fitting out included) (see Remarks)	21	9	31	25	56	65
(b) Fitting Out for Ancillary Facilities (Total area to be fitted out = 21 m2 CFA)		€;	45	8	45	45
2.0 Other Adjustments for Item 1.0 Above						
3.0 Development Contingency (5% for non-standard works/elements)			4	10	5	5
			<	\$,000.00		
Total Cost of Unallocable Portion at June 2001 Price Level = Total of Items in 1.0 to 3.0		9	80	26	106	[15
(including Provisions for Contract Fluctuations)						(\$5,460/m2 CFA)

Notes:-

1 For fitting out for Ancillary Facilities, refer to Guidance Notes on Cost Split for items to be chargeable to unallocable portion.

Remarks : -

	<u>m2</u> CFA
Unallocable Portion includes the following :	
- MAC Office	21

B Form 5 (22/09/00)

Page 4 of 11

Construction Cost Budget No. 5 (Domestic Blocks: RCHE Portion)

Project: Redevelopment of Lam Tin Estate Phase 10 (PHDP Code: KL29RR)

Building: 1No. Composite Building 19 storeys in which storeys (1/F to 5/F) are for Residential Care Home for the Elderly

					the Elderty
Cost at June 2001 Price Level	<u></u>		Estimate C		
South and the Ester	CFA (m2)	Foundation		g (Excl Caps)	TOTAL
	(1112)	(Incl Caps)	Builder's Work	Building Service	s
1.0 Estimated Cost for Residential Care Home		<		.000.00	
for the Elderly			1		1
		•	i		1
(a) Residential Care Home for the Elderly	4,120	1,832	15,220	3,320	20,371
1/F to 5/F No. of Places		Í			20,5/1
		1	1		ł
		ĺ	1		1
]	i		
i]			i
	Sub-Total (A	1,832		00.00	>
	DES TOTAL (A	1,632	15,220	3,320	20,371
(Total CFA = 4,120 m2)				m	
					(\$4,944/m2 CFA
					(\$101,856/place
.0 Adjustments		-	\$,(00.00	
Add allowance for increase in structure due to		J i	0		
transfer structure above(refer summary page 2 of 11)	iii		3.90		0
		1		į.	
_	C 1 T 44				
	Sub-Total (B)	!	0	1	0
		l i	ĺ	1	(\$0/m2 CFA)
					#DIV/0!
Development Contingency		<	5,00	00.00	>
All non-standard blocks and all standard elements other	46		-	ł	•
superstructure (5%)	Than	92	761	166	1,019
Sub-Total (C)		92	761	166	1,019
	100			1	
	120	İ		1	(\$247/m2 CFA)
					#DIV/0!
	1				
Total Cost of Domestic Block - Residential Care Home	.		\$,000	0.00	>
for the Elderly at June 2001 Price Level = $(A) + (B)	·(C)	1,924	15,981	3,486	21,390
Contract Fluctuations)	1]	į		(\$5,192/m2 CFA)
7		I .			#D[V/0]

Notes:

2.	The total cost of transfer plate (S		2.588	M) is apportioned among SHD (\$	2.056	M), and
	RCHE (\$	0.529 M) exclud		ngency and inflation		741), MING

B Form 4

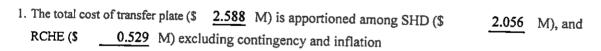
Foundation cost is based on SE's letter of 26 February 2002 (Socketted H-pile and footing)

Construction Cost Budget No. 5 (Transfer Structures - Commonly Shared Across Phases of the Development and Amongst Various HA Businesses)

Project: Redevelopment of Lam Tin Estate Phase 10 (PHDP Code: KL29RR)

	Estimated	Cost (in \$,000)	000)	
Cost at June 2001 Price Level	Building	Others	TOTAL	
1.0 Transfer Structures based on actual design	<	\$,000.00		
Transfer of actual design				
(a) Transfer structure	2,056	-	2,056	
Sub-Total (A)	2,056	-	2,056	
2.0 Development Contingency	<	\$,000.00		
(5% for non-standard works/elements) Sub-Total (B)	103	S#37	103	
Total Cost of Commonly Shared Transfer Structures at June 2001 Price Level = (A) + (B)	2,159	-	2,159	
(including Provisions for Contract Fluctuations)	36			

Notes:



Construction Cost Budget No. 5 (External Works - Commonly Shared Across Phases of the Development and Amongst Various HA Busiesses)

Project : Redevelopment of Lam Tin Estate Phase 10 (PHDP Code: KL29RR)

Total GEA = 2,606 m2; Total CFA= 16,051	m2	Total LAA =	2,399 m2
Cost at June 2001 Price Level	Estima Foundation (Incl. Caps)	Building (Excl	TOTAL
1.0 External Works based on Actual Design (Include Contract Price Fluctuation)	<	Caps) \$,000.00	
(a) Hard Landscape Works (Amenities) & Others. (b) Underground Drainage (c) Allowance for Other External Works (e) Allowance for Fluctuation	* 2 *	4,053 1,282 406	4,053 1,282 406 144
Sub-total (A)	-	\$,000.00 5,884	5,884 (\$367/m2 CFA) (\$2,258/m2 GEA)
Special External Works based on Actual Design (incl. Contract Price Fluctuation) Footbridge/staircases/ramp/decking	<	- \$,000.00	>
(b) Allowance for external signage (c) Retaining walls (d) Photovoltaic System (e) External Sculpture (f) Tree Transplant	-	2,958 159 7,301 1,400 796	2,958 159 7,301 1,400 796
(g) Slope treatment (h) Landscape worj between phase 10 plan and existing playground (about 200m2) (i) Allowance for Fluctuation	-	80 796 159 341	80 796 159 341
Sub-total (B)	-	13,990	13,990 (\$872/m2 CFA) (\$5,368/m2 GEA)
.0 Development Contingency (5% for non-standard works/elements)	•	5,000.00	994
Sub-total (C)	-	994	994 (\$62/m2 CFA) (\$381/m2 QEA)
Total Cost of Commonly Shared External Works at June 2001 Price Level = (A) + (B) + (C) (including Provisions for Contract Fluctuations)		\$,000.00	20,868 (\$1,300/m2 CFA) (\$8,008/m2 GEA)

Cost at June 2001 Price Level	Estimate	I Cost	
	Soft Landscape	Others	TOTAL
O Cost of Other Separate Contracts (incl. Softlandscaping Work) at June 2001 Price Level	384	106	490
0 Development Contingency		1	
) (5% for non-standard works/elements)	19	5	_
	<	5.000.00	24
4	403	111	514
Total Cost of Other Separate Contracts	1	ľ	
(incl. Softlandscaping Work) at June 2001 Price Level	l 1		
Price Level = Total of Items 4.0 to 5.0)	! 1		
(including Provisions for Contract Fluctuations)	1		
,	1 1	ľ	(\$32/m2 CFA
	j ,	1	(\$197/m2 GEA

Remarks:

The cost for loading/unloading area for ambulance, refuse collection van etc at LG/F is included here.

EXTERNAL WORKS - COST ANALYSIS / ESTIMATE

- * Elemental cost estimate at June 2001 Tender prices.
- * Standard Construction Cost Yardstick at <u>June 2001</u> Price Levels are shown in brackets () for comparison.
- * Project Unit Costs in Budget at June 2000 Price Levels shown in brackets () for comparison.

Others External Works Main/sub-main etc. Irrigation Builder's work in connection with BS installation/services Connection works by Government Depts/Utility Co. Sub-Total Total 1, 2 & 3	(99) (250) (18) (237) (130) (635) (3,767)	250 18 237 130 635	(38) (96) (7) (91) (50) (244)	96 7 91 50 244	(6) (15) (1) (14) (8) (38)	21 12 1 12 6 31	(132) (10) (125) (68) (335)	175 104 8 99 54 265
Others External Works Main/sub-main etc. Irrigation Builder's work in connection with BS installation/services Connection works by Government Depts/Utility Co.	(99) (250) (18) (237) (130)	250 18 237	(38) (96) (7) (91) (50)	96 7 91 50	(6) (15) (1) (14) (8)	21 12 1 12 6	(132) (10) (125) (68)	175 104 8 99 54
Others External Works Main/sub-main etc. Irrigation Builder's work in connection with BS installation/services Connection works by Government	(99) (250) (18) (237)	250 18 237	(96) (7) (91)	96 7 91	(6) (15) (1) (14)	21 12 1 12	(132) (10) (125)	175 104 8
Others External Works Main/sub-main etc. Irrigation Builder's work in connection with BS installation/services	(99) (250) (18)	420 250 18	(38) (96) (7)	96 7	(6) (15) (1)	21	(132) (10)	175 104 8
Others External Works Main/sub-main etc. Irrigation Builder's work in connection with BS	(99) (250) (18)	420 250 18	(38) (96) (7)	96 7	(6) (15) (1)	21	(52)	175
Others External Works Main/sub-main etc. Irrigation	(99) (250)	420 250	(38)	161	(6) (15)	21	(52)	175
Others External Works Main/sub-main etc.	(99) (250)	420 250	(38)	161	(6) (15)	21	(52)	175
Soft Landscape Others External Works	(99)	420	(38)	161	(6)			
Soft Landscape								
	· · · · ·	.,,000	(-,,		(4,2)		(-,-,-,	
Sub-Total	(3,033)	4.659	(1.164)	1.788	(179)	230	(1.593)	1,943
(a) MISCORRIGOUS	(102)	102	(39)	39	(6)	5	(53)	43
	(1.00)					- [-	
1.7	(26)	ĺ	(10)	Ì	(2)	j	(14)	
	(8)		(3)		(1)	- 1	(4)	
	(222)	711	(85)	273	(13)	35	(116)	296
		[- 1	, ,		()	50
	(86)	86	(33)	33	(5)	4		36
	(31)	31	(12)	12		2		13
Estate amenities (ball courts, seating etc.)	(206)	206	(79)	79)		86
Fencing/railings/guard house/drop gate	(122)	122	(47)	,			. ,	33 51
Play equipment	(83)	83	(32)	- 1				262 35
Covered walkways (paving incl. in item 1.5)	(628)	628		241		31		363
Water feature/pond	(21)			77		0		51
Pavilions/pergolas/shelters	1 '		' '		•			622
Paving (incl. emergency access & safety mat)	(751)	1.491		572		74		(00
Open carparking spaces on estate roads	, ,		\ \-·,	أ		0		64
Estate Roads	(154)		. ,					120
Walls (screen/toe/planter)	(289)		, , , ,		` ,			264
Site works (levelling/clearance)	(177)	634	(68)	243	(10)	31	(02)	36
Hard Landscape Works (Amenities)	3,000	,	<u>⊅/π</u>	14	3/m.	<u> </u>	<u>\$/m</u>	2
	\$ 000) 00						
ELEMENT	Total	Cost	j.		CFA of All	Building	Lands	cape
					Unit Co.	sts/m2		
C. A or an Dunnings within GEA	:	20,171 m2	!	Ratio LA.	A: PBA = 1:	0.00		
·								
- ' '	:							
, ,	:							
· · ·	: 2,606 m2 Ratio GSA : GEA = 1: 1.00							
							٠.	
Project Title: Lam Tin Phase 10		U						
	Project Code (PHDP): KL29RR Gross Site Area (GSA) Gross Estate Area (GEA) Landscape Area (LAA) Plant Bed Area (PBA) CFA of all Buildings within GEA ELEMENT Hard Landscape Works (Amenities) Site works (levelling/clearance) Walls (screen/toe/planter) Estate Roads Open carparking spaces on estate roads Paving (incl. emergency access & safety mat) Pavilions/pergolas/shelters Water feature/pond Covered walkways (paving incl. in item 1.5) Play equipment Fencing/tailings/guard house/drop gate	Gross Site Area (GSA) Gross Estate Area (GEA) Landscape Area (LAA) Plant Bed Area (PBA) CFA of all Buildings within GEA ELEMENT Total ELEMENT Total Hard Landscape Works (Amenities) Site works (levelling/clearance) Walls (screen/toe/planter) Estate Roads Open carparking spaces on estate roads Paving (incl. emergency access & safety mat) Pavilions/pergolas/shelters Water feature/pond Covered walkways (paving incl. in item 1.5) Play equipment Fencing/railings/guard house/drop gate Estate amenities (ball courts, seating etc.) Amphitheater/estate entertainment Refuse collection area/junk points BS installations (a) External lighting (c) Others Sundries (a) Miscellaneous (102)	Cross Site Area (GSA) 2,606 m2	Project Code (PHDP): KL29RR	Project Code (PHDP) : KL29RR	Project Code (PHDP): KL29RR	Project Code (PHDP): KL29RR	Project Code (PHDP) : KL29RR

Phase Code (PHDP):

10

		Total Cost		Unit Costs/m2					
1	ELEMENT			Gross Estate		CFA of All Building		Landscape	
		\$ 000	\$,000.00		GEA				ea
		3,000	<u>u</u>	<u>\$/r</u>	<u>n2</u>	\$/n	12	\$/m2	
4.	<u>Underground Drainage</u> (inc. all U/G soil and surface water drainage and channels and gullies)	(1,611)	1,611	(618)	618	(95)	80	(847)	672
	Total 1, 2, 3 & 4	(5,378)	7,325	(2,064)	2,811	(318)	362	(2,827)	3,055
5	Special External Works								
5.1	Footbridges/staircases/ramps/decking	0	3,717	0	1.426	0	184	0	
5.2	External Signages	0	200	0	77	0	10	0	1,549
5.3	Retaining walls	0	9,175	0	3,521	0	455	0	83
5.4	Photovoltaic system	0	1,400	0	537	0	69	0	3,825
5.5	External sculptures	0	1,000	0	384	0	50	0	584
5.6	Tree transplant	0	100	0	38	0	5	0	417
5.7	Landscape work between phase 10 plan and existing playground (about 200m2)	0	200	0	77	0	10	0	42 83
	Sub-Total	0	15,792	0	6,060	0	783	0	6,583
	GRAND TOTAL	(5,378)	23,117	(2,064)	8,871	(318)	1,145	(2,827)	9,638

Inclusion :

All elemental costs are inclusive of contingencies and preliminaries.

Roof landscape areas and costs

Exclusion:

- (1) Demolition / site formation not in building contract.
- (2) Fluctuations in labour and materials.
- (3) Fees and on costs.
- (4) Automatic refuse collection system (ARCS) including associated builder's work.
- (5) Development contingency

(Demolition)

Project: Redevelopment of Lam Tin Estate Phase 10 (PHDP Code: KL29RR)

	Estimated (Estimated Cost (in \$,000)		
Cost at June 2001 Price Level	Demolition	Others	TOTAL	
Estimated Cost for Demolition (a) Demolition of existing welfare building, estate office, post office and carpark (including removal of asbestos)	4,286	-	4,286	
Total Cost of Demolition / Other Sub-Total (A)	4,286	-	4,286	
2.0 Development Contingency (a) (5% for non-standard works/elements)	214	(2)	214	
Sub-Total (B)	214	-	214	
Total Cost of Demolition / Other at June 2001 Price Level = (A) + (B) (including Provisions for Contract Fluctuations)	4,500	-	4,500	

Notes:

^{1.} Demolition Cost of HK\$4.5M is advised by Consultant QS (Northcroft) including Preliminaries, Contingency and TPI adjustment

Site Development Cost Budget No.5 (Modification to Existing Carpark at Lam Tin Phase 4)

Project: Redevelopment of Lam Tin Estate Phase 10 (PHDP Code:KL29RR)

Control 2001 Pil V	Estimated (
Cost at June 2001 Price Level	Modification Works	Others	TOTAL
Estimated Cost for Modification Works (a) Modification works to existing carpark at Lam Tin Phase 4 including footbridge connecting Lam Tin Phase 4 and 10	3,525	-	3,525
Total Cost of Modification Works Sub-Total (A)	3,525	-	3,525
2.0 <u>Development Contingency</u> (a) (5% for non-standard works/elements)	176	-	176
Sub-Total (B)	176	<u>-</u>	176
Total Cost of Modification Works at June 2001 Price Level = (A) + (B) (including Provisions for Contract Fluctuations)	3,701	-	3,701