

In the Privy Council

ON APPEAL
FROM THE COURT OF APPEAL OF HONG KONG

BETWEEN

WONG LAI YING	<i>1st Appellant</i>
MAN CHIU TONG	<i>2nd Appellant</i>
CHUNG YUK WA, AGNES	<i>3rd Appellant</i>
LEUNG SHING KWAN, CHARLES and LAM SHUK HAN, MARGARET	<i>4th Appellants</i>
WONG MAN TAK and LUI LAI YING	<i>5th Appellants</i>
KWOK ON PONG	<i>6th Appellant</i>
TAM KWOK CHEUNG, NG TACK MAY and NG TACK MAY, Personal Representative of NG MAY LAN deceased	<i>7th Appellants</i>
CHAN KAI SHIU and LAI KWOK MEI, AMY	<i>8th Appellants</i>
TSENG HING YU	<i>9th Appellant</i>
CHENG SI YIC and CHEUNG LAI SUN, JULIANA	<i>10th Appellants</i>
LO KAM TO	<i>11th Appellant</i>
LO KAI FAI	<i>12th Appellant</i>
YIM YAN	<i>13th Appellant</i>
CHAN KWAN SHEUNG	<i>14th Appellant</i>
AU YEUNG CHUNG OI, BETTY	<i>15th Appellant</i>
LAM TSANG SUK YEE	<i>16th Appellant</i>
CHENG CHI CHION	<i>17th Appellant</i>
LI YU TUNG	<i>18th Appellant</i>
TSANG SUK YEE	<i>19th Appellant</i>
LOCK CHEUNG HELEN	<i>20th Appellant</i>
TO SAI MUI	<i>21st Appellant</i>
TSANG YUK KING	<i>22nd Appellant</i>
LOKE YIP NGOI YAN	<i>23rd Appellant</i>
NG HOI MING	<i>24th Appellant</i>
and	
CHINACHEM INVESTMENT CO. LTD.	<i>Respondent</i>

RECORD OF PROCEEDINGS

VICTORIA Y. CHAN & CO.
Solicitors for the Appellants

F. ZIMMERN & CO.
Solicitors for the Respondent

In the Privy Council

ON APPEAL
FROM THE COURT OF APPEAL OF HONG KONG

BETWEEN

WONG LAI YING	<i>1st Appellant</i>
MAN CHIU TONG	<i>2nd Appellant</i>
CHUNG YUK WA, AGNES	<i>3rd Appellant</i>
LEUNG SHING KWAN, CHARLES and LAM SHUK HAN, MARGARET	<i>4th Appellants</i>
WONG MAN TAK and LUI LAI YING	<i>5th Appellants</i>
KWOK ON PONG	<i>6th Appellant</i>
TAM KWOK CHEUNG, NG TACK MAY and NG TACK MAY, Personal Representative of NG MAY LAN deceased	<i>7th Appellants</i>
CHAN KAI SHIU and LAI KWOK MEI, AMY	<i>8th Appellants</i>
TSENG HING YU	<i>9th Appellant</i>
CHEUNG SI YIC and CHEUNG LAI SUN, JULIANA	<i>10th Appellants</i>
LO KAM TO	<i>11th Appellant</i>
LO KAI FAI	<i>12th Appellant</i>
YIM YAN	<i>13th Appellant</i>
CHAN KWAN SHEUNG	<i>14th Appellant</i>
AU YEUNG CHUNG OI, BETTY	<i>15th Appellant</i>
LAM TSANG SUK YEE	<i>16th Appellant</i>
CHEUNG CHI CHION	<i>17th Appellant</i>
LI YU TUNG	<i>18th Appellant</i>
TSANG SUK YEE	<i>19th Appellant</i>
LOCK CHEUNG HELEN	<i>20th Appellant</i>
TO SAI MUI	<i>21st Appellant</i>
TSANG YUK KING	<i>22nd Appellant</i>
LOKE YIP NGOI YAN	<i>23rd Appellant</i>
NG HOI MING	<i>24th Appellant</i>

and

CHINACHEM INVESTMENT CO. LTD.	<i>Respondent</i>
--------------------------------------	-------------------

RECORD OF PROCEEDINGS

**RECORD OF PROCEEDINGS
INDEX OF REFERENCE**

No.	Description of Document	Date	Page
<p>IN THE SUPREME COURT OF HONG KONG HIGH COURT</p> <p>ACTION NO. 2739 OF 1975</p> <hr style="width: 20%; margin: auto;"/>			
1.	Writ of Summons endorsed with Statement of Claim with Schedule	7th Nov. 1975	1
2.	Defence and Counterclaim with Schedule	19th Dec. 1975	8
3.	Reply and Defence to Counterclaim	8th Jan. 1976	12
4.	Notes of Evidence — the Honourable Mr. Justice Li		
5.	Judgment of the Honourable Mr. Justice Li	3rd Dec. 1977	50
6.	Order of the Honourable Mr. Justice Li	3rd Dec. 1977	63
<p>IN THE COURT OF APPEAL CIVIL APPEAL NO. 5 OF 1978</p> <p>(On appeal from High Court Action No. 2739 of 1975)</p> <hr style="width: 20%; margin: auto;"/>			
1.	Notice of Appeal	12th Jan. 1978	65
2.	Respondent's Notice	1st Feb. 1978	68
3.	Judgment of the Honourable Mr. Briggs, Chief Justice ...	4th Aug. 1978	70
4.	Judgment of the Honourable Mr. Justice Huggins	4th Aug. 1978	80
5.	Judgment of the Honourable Mr. Justice Pickering	4th Aug. 1978	85
6.	Order of Court of Appeal	4th Aug. 1978	86
7.	Further Order of Court of Appeal	9th Nov. 1978	88
8.	Notice of Motion for leave to appeal to Privy Council	11th Aug. 1978	90
9.	Order for conditional leave to appeal to Privy Council	9th Nov. 1978	91
10.	Notice of Motion to extend time for preparing and despatching the Record of Proceedings to England	15th Jan. 1979	93
11.	Order to extend time for preparing and despatching and Record of Proceedings to England	23rd Jan. 1979	95

**AGREED BUNDLE OF DOCUMENTS BETWEEN
PLAINTIFFS AND DEFENDANT IN HIGH COURT ACTION
NO. 2739 OF 1975**

No. referred to in the agreed bundle	Description of Documents	Date	Page
7	Instruction form & English translation	7/ 1/72	97
35	Agreement for sale Chinachem Investment Company Limited to Wong Lai Ying (1st Plaintiff in H.C. 2739/75)	20/ 3/71	99
1 & 2	Floor plan and price list & English translation	15/ 2/71	111
243	Brochure and price list & English translation	7/77	114
246	Advertisement from newspaper and English translation		117
247	Brochure		119
59	Copy Building Authority Form 12 (approval of amended plans) ..	9/10/71	120
244	Building Authority Form 14 (Consent)	17/11/71	121
60	Copy Building Authority Form 9 (application for approval of plans and notice of appointment of architect etc.)	3/12/71	123
62	Photograph showing Inland Lot No. 8171 and neighbouring premises, taken	21/ 5/73	125
63	Copy letter F. Zimmern & Co. to Building Authority	23/ 6/72	126
64	Copy letter F. Zimmern & Co. to Director of Public Works ...	3/ 8/72	127
65	Letter Director of Public Works to F. Zimmern & Co.	14/ 8/72	128
66	Copy letter C.H. Duff to Director of Public Works	27/10/72	129
67	Letter Building Authority to C.H. Duff	3/11/72	131
68	Copy letter C.H. Duff to Building Authority with copy Building Authority Form 13 and copy sketch plan thereto annexed ...	22/11/72	133
69	Letter Building Authority to C.H. Duff	22/11/72	136
70	Rainstorm Disaster 1972 (Final Report of the Commission of Inquiry)	1/72	137 (annex)
71	Building Authority Form 14 (consent)	1/12/72	138
72	Letter Building Authority to C.H. Duff	14/12/72	139
245	Circular letter — Building Authority	28/12/72	140
73	Letter Building Authority to C.H. Duff	16/ 1/73	143
74	Copy letter C.H. Duff to Building Authority (copy drawing therein referred to missing)	24/ 1/73	144
76	Letter Scott Wilson, Kirkpatrick and Partners (hereinafter referred to as S.W.K. & P.) to Defendant	14/ 8/73	145
77	Copy letter Defendant to S.W.K. & P.	14/ 8/73	146
78	Letter S.W.K. & P. to Defendant	7/ 9/73	147
81	Copy letter Defendant to S.W.K. & P.	15/ 9/73	148
82	Letter S.W.K. & P. to Defendant	24/ 9/73	149

**AGREED BUNDLE OF DOCUMENTS BETWEEN
PLAINTIFFS AND DEFENDANT IN HIGH COURT ACTION
NO. 2739 OF 1975**

No. referred to in the agreed bundle	Description of Documents	Date	Page
83	Copy letter Defendant to S.W.K. & P.	31/10/73	150
84	Copy letter Defendant to S.W.K. & P.	8/11/73	151
85	Letter S.W.K. & P. to Defendant	16/11/73	152
86	Copy printed letter Defendant to Customers in Chinese and English	4/12/73	153
92	Copy letter from Lo Kam To to Public Works Department ...	27/ 3/74	155
95	Printed letter Highways Office to C.H. Duff	16/ 4/74	156
96	Letter from Public Works Department to Lo Man To	22/ 4/74	157
97	Copy letter Defendant to S.W.K. & P.	27/ 4/74	158
98	Letter S.W.K. & P. to Defendant	9/ 5/74	159
100	Report of S.W.K. & P.	8/74	160
101	Copy letter Defendant to S.W.K. & P.	4/ 9/74	176
102	Copy letter C.H. Duff to Public Works Department	27/11/74	177
104	Letter Highways Office to C.H. Duff	11/12/74	178
243a	Notes on Report — Building Authority	24/ 1/75	179
105	Copy letter from Yim Yan to Public Works Department ...	4/ 3/75	181
106	Copy letter from Public Works Dept. to Yim Yan	13/ 3/75	182
107	Copy letter Defendant to S.W.K. & P.	20/ 3/75	183
108	Letter S.W.K. & P. to Defendant	26/ 3/75	184
109	Copy letter from Ford, Kwan & Co. to Public Works Department	4/ 4/75	185
110	Copy letter from Public Works Department to Ford, Kwan & Co.	14/ 4/75	186
111	Copy letter from Ford, Kwan & Co. to Defendant	23/ 4/75	187
112	Copy letter Defendant to S.W.K. & P.	24/ 4/75	188
113	Copy letter from Defendant to Ford, Kwan & Co.	25/ 4/75	189
114	Letter S.W.K. & P. to Defendant	25/ 4/75	190
115	Letter S.W.K. & P. to Defendant	7/ 5/75	191
116	Copy letter C.H. Duff to Building Authority (excluding copy reports mentioned therein)	8/ 5/75	192
117	Letter S.W.K. & P. to Defendant	12/ 5/75	193
119	Addendum report S.W.K. & P.	6/75	194
120	Copy letter from Hwang & Co. to Public Works Department	2/ 6/75	202

**AGREED BUNDLE OF DOCUMENTS BETWEEN
PLAINTIFFS AND DEFENDANT IN HIGH COURT ACTION
NO. 2739 OF 1975**

No. referred to in the agreed bundle	Description of Documents	Date	Page
121	Copy letter from Hwang & Co. to Public Works Department	10/ 6/75	203
122	Letter S.W.K. & P. to Defendant (amended addendum report therein mentioned not annexed)	16/ 6/75	204
123	Letter Building Authority to C.H. Duff	17/ 6/75	205
124	Letter from Public Works Department to Hwang & Co. ...	19/ 6/75	206
125	Copy letter C.H. Duff to Building Authority	19/ 6/75	207
126	Copy letter C.H. Duff to Building Authority	10/ 7/75	208
127	Copy letter C.H. Duff to Building Authority	7/ 8/75	212
128	Copy letter C.H. Duff to Building Authority	8/ 8/75	213
129	Copy letter from Hwang & Co. to Defendant	19/ 8/75	215
130	Letter from F. Zimmern & Co. to Hwang & Co. (No. JC/4763/75)	20/ 8/75	216
131	Letter from F. Zimmern & Co. to Hwang & Co. (No. JC/4763/75)	20/ 8/75	218
132	Letter S.W.K. & P. to Defendant	22/ 8/75	219
133	Letter Building Authority to C.H. Duff with copy Cease Work Order by Building Authority with marked cutting from a calender	23/ 8/75	220
135	Letter from Hwang & Co. to Public Works Department ...	27/ 8/75	223
136	Letter Building Authority to C.H. Duff	27/ 8/75	224
137	Letter from F. Zimmern & Co. to Hwang & Co.	8/ 9/75	225
138	Building Authority, Form 16	8/ 9/75	226
139	Letter from Hwang & Co. to F. Zimmern & Co.	11/ 9/75	229
140	Letter Building Authority to C.H. Duff	11/ 9/75	230
141	Letter C.H. Duff to Building Authority with copy Building Authority Form 10, Form 13 (copies of plans and calculations therein referred to missing)	15/ 9/75	232
142	Letter from Hwang & Co. to Defendant (JC/4763/75 (A)) ...	18/ 9/75	235
143	Letter from Hwang & Co. to Defendant (JC/4763/75 (B)) ...	18/ 9/75	236
144	Letter from Hwang & Co. to F. Zimmern & Co.	18/ 9/75	237
145	Letter from F. Zimmern & Co. to Hwang & Co. (25599) ...	18/ 9/75	238
146	Letter from F. Zimmern & Co. to Hwang & Co. (25643) ...	18/ 9/75	239
147	Letter from F. Zimmern & Co. to Hwang & Co. (25644) ...	18/ 9/75	240
148	Letter S.W.K. & P. to Defendant	18/ 9/75	241

**AGREED BUNDLE OF DOCUMENTS BETWEEN
PLAINTIFFS AND DEFENDANT IN HIGH COURT ACTION
NO. 2739 OF 1975**

No. referred to in the agreed bundle	Description of Documents	Date	Page
149	Copy letter from Hwang & Co. to F. Zimmern & Co.	20/ 9/75	242
150	Letter from F. Zimmern & Co. to Hwang & Co.	20/ 9/75	243
151	Letter from Hwang & Co. to F. Zimmern & Co.	23/ 9/75	244
152	Letter from Hwang & Co. to F. Zimmern & Co.	24/ 9/75	245
153	Letter from F. Zimmern & Co. to Hwang & Co.	27/ 9/75	246
154	Letter from F. Zimmern & Co. to Tseng Hing Yu (9th Plaintiff in H.C. 2739/75)	27/ 9/75	247
155	Letter from F. Zimmern & Co. to To Sai Mui (21st Plaintiff in H. C. 2739/75)	27/ 9/75	248
156	Letter from Hwang & Co. to F. Zimmern & Co.	2/10/75	249
157	Building Authority letter of Disapproval	3/10/75	250
158	Letter from Public Works Department to Hwang & Co. ...	4/10/75	252
225	Letter from Public Works Department to Bernard Wong & Co.	4/10/75	253
159	Copy letter Building Authority to C.H. Duff	16/10/75	254
160	Copy letter C.H. Duff to Building Authority	21/10/75	255
161	Letter from Hwang & Co. to F. Zimmern & Co.	21/10/75	256
162	Letter from Hwang & Co. to F. Zimmern & Co.	5/11/75	257
163	Building Authority letter of Approval	13/11/75	258
164	Approval of caisson retaining wall, caisson and caisson cap plan	13/11/75	259
165	Letter Building Authority to C.H. Duff and Form 14 with endorsements	24/11/75	261
166	Copy Building Authority Form 16	26/11/75	263
175	Copy letter C.H. Duff to Building Authority	9/ 1/76	264
176	Copy letter C.H. Duff to Building Authority (with copy Form 13 annexed)	16/ 1/76	265
177	Copy letter C.H. Duff to Building Authority with copy Building Authority Form 13	28/ 1/76	267
178	Letter Building Authority to C.H. Duff	24/ 1/76	269
179	Printed letter Building Authority to C.H. Duff with Building Authority Form 12 (approval of Plan)	24/ 1/76	270
180	Copy letter C.H. Duff to Building Authority	17/ 2/76	272
181	Copy letter C.H. Duff to Building Authority	17/ 2/76	273
183	Letter Building Authority to C.H. Duff	14/ 2/76	274
184	Letter C.H. Duff to Building Authority with Form 13	1/ 3/76	275

**AGREED BUNDLE OF DOCUMENTS BETWEEN
PLAINTIFFS AND DEFENDANT IN HIGH COURT ACTION
NO. 2739 OF 1975**

No. referred to in the agreed bundle	Description of Documents	Date	Page
185	Letter C.H. Duff to Building Authority with Form 13	2/ 3/76	277
186	Letter Building Authority to C.H. Duff with Form 13	3/ 3/76	279
188	Letter from Building Authority to C.H. Duff with Form 12 ...	19/ 3/76	281
189	Letter from Building Authority to C.H. Duff	26/ 3/76	283
190	Copy letter from C.H. Duff to Building Authority	29/ 3/76	284
191	Letter from Building Authority to C.H. Duff	30/ 3/76	285
192	Copy letter from C.H. Duff to Building Authority	30/ 3/76	286
193	Copy letter from C.H. Duff to Building Authority	13/ 4/76	287
194	Letter from Building Authority to C.H. Duff	11/ 5/76	288
195	Letter from Crown Lands & Survey Office to Defendant ...	7/ 6/76	289
197	Copy letter from K.K. Wong to Building Authority	13/ 7/76	290
198	Copy letter from Crown Lands & Survey Office to F.Y. Kan & Partners	20/ 7/76	291
199	Letter from Building Authority to C.H. Duff	9/ 8/76	292
200	Copy letter from K.K. Wong to Building Authority	14/ 8/76	294
201	Copy letter from C.H. Duff to Building Authority	31/ 8/76	295
203	Copy letter from C.H. Duff to Building Authority with Form 21	6/ 9/76	296
204	Copy letter from C.H. Duff to Building Authority	7/ 9/76	298
205	Letter from Building Authority to C.H. Duff with Form 12 ...	15/ 9/76	299
226	Letter Public Works Department to Bernard Wong & Co. ...	30/ 9/76	301
209	Copy letter from C.H. Duff to Building Authority	11/10/76	302
210	Letter from Building Authority to C.H. Duff	11/10/76	303
211	Letter from Building Authority to C.H. Duff with Form 12 ...	12/10/76	304
227	Letter Public Works Department to Bernard Wong & Co. ...	19/10/76	306
215	Copy letter from C.H. Duff to Building Authority	29/10/76	307
218	Copy letter from Building Authority to C.H. Duff	15/11/76	308
219	Copy letter from C.H. Duff to Building Authority with Form 14	17/11/76	309
220	Letter from Building Authority to C.H. Duff with Form 12 ...	29/11/76	312
222	Letter from C.H. Duff to Building Authority with Form 13 and Form 15	4/12/76	314
242	Statutory Declaration by Charles Duff with statement annexed dated 5th August 1977	5/ 8/77	317

DOCUMENTS NOT PRINTED

No. referred to
in the agreed bundle

Description of Documents

3-6, 8-34, 36-58, 61, 75, 79-80, 87-91, 93-94, 99, 103, 118, 134, 167-174,
182, 187, 196, 202, 206-208, 212-214, enclosures to 215, 216-217, 221,
223-224, 228-241.

and

EXHIBITS A, B, C, D, E, F, G, H and I
(High Court Action No. 2739 of 1975)

IN THE SUPREME COURT OF HONG KONG
HIGH COURT
ACTION NO. 2739 OF 1975

IN THE SUPREME COURT OF HONG KONG
ORIGINAL JURISDICTION

BETWEEN

WONG LAI YING	1st Plaintiff	
MAN CHIU TONG	2nd Plaintiff	
CHUNG YUK WA, AGNES	3rd Plaintiff	
LEUNG SHING KWAN, CHARLES and LAM SHUK HAN, MARGARET	4th Plaintiffs	
WONG MAN TAK and LUI LAI YING	5th Plaintiffs	10
KWOK ON PONG	6th Plaintiff	
TAM KWOK CHEUNG, NG TACK MAY and NG TACK MAY, Personal Representative of NG MAY LAN deceased	7th Plaintiffs	
CHAN KAI SHIU and LAI KWOK MEI, AMY	8th Plaintiffs	
TSENG HING YU	9th Plaintiff	
CHENG SI YIC and CHEUNG LAI SUN, JULIANA	10th Plaintiffs	20
LO KAM TO	11th Plaintiff	
LO KAI FAI	12th Plaintiff	
YIM YAN	13th Plaintiff	
CHAN KWAN SHEUNG	14th Plaintiff	
AU YEUNG CHUNG OI, BETTY	15th Plaintiff	
LAM TSANG SUK YEE	16th Plaintiff	
CHENG CHI CHION	17th Plaintiff	
LI YU TUNG	18th Plaintiff	
TSANG SUK YEE	19th Plaintiff	30
LOCK CHEUNG HELEN	20th Plaintiff	
TO SAI MUI	21st Plaintiff	
TSANG YUK KING	22nd Plaintiff	
LOKE YIP NGOI YAN	23rd Plaintiff	
NG HOI MING	24th Plaintiff	
v. CHINACHEM INVESTMENT CO. LTD.	Defendant	

ELIZABETH THE SECOND, BY THE GRACE OF GOD, OF THE
UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND
AND OF OUR OTHER REALMS AND TERRITORIES QUEEN, HEAD OF
THE COMMONWEALTH, DEFENDER OF THE FAITH: 40

To Chinachem Investment Co. Ltd. whose registered office is situate at Room
1001-3 Bank of Canton Building, 6 Des Voeux Road Central, Hong Kong.

Supreme Court of Hong Kong

No. 1 Writ of Summons endorsed with Statement of Claim with Schedule 7th Nov. 1975 (Contd.)

We command you that within 8 days after the service of this Writ on you, inclusive of the day of service, you do cause an appearance to be entered for you in an action at the suit of Wong Lai Ying, the above-named 1st Plaintiff of Flat 35, 23rd floor of Bagio Villa, 550 Victoria Road, Hong Kong, Man Chiu Tong, the above-named 2nd Plaintiff of Flat 35, 23rd floor of Bagio Villa, 550 Victoria Road, Hong Kong, Chung Yuk Wa, Agnes, the above-named 3rd Plaintiff of 3rd floor of 34 Lyttelton Road, Hong Kong, Leung Shing Kwan, Charles and Lam Shuk Han, Margaret, the above-named 4th Plaintiffs both of Flat C, 16th floor of Caineway Mansion, 128-132 Caine Road, Hong Kong, Wong Man Tak and Lui Lai Ying, the above-named 5th Plaintiffs both of Flat F, 7th floor of Conway Mansion, 29 Conduit Road, Hong Kong, Kwok On Pong, the above-named 6th Plaintiff of 10 Ching Wah Street, 2nd floor, North Point, Hong Kong, Tam Kwok Cheung, Ng Tack May and Ng Tack May, Personal Representative of Ng May Lan deceased, the above-named 7th Plaintiffs all of 925 King's Road, 8th floor, North Point, Hong Kong, Chan Kai Shiu and Lai Kwok Mei, Amy, the above-named 8th Plaintiffs both of 10 Ching Wah Street, 2nd floor, Hong Kong, Tseng Hing Yu, the above-named 9th Plaintiff of 22 Des Voeux Road, Central, (Wing On Bank Ltd.), Hong Kong, Cheng Si Yic and Cheung Lai Sun, Juliana, the above-named 10th Plaintiffs both of 1 Kwong Wah Street, Yan On Building, 15th floor, Block A4, Kowloon, Lo Kam To, the above-named 11th Plaintiff of 15 O'Brien Road, 2nd floor, Hong Kong, Lo Kai Fai, the above-named 12th Plaintiff of 21A Ventris Road, 4th floor, Happy Valley, Hong Kong, Yim Yan, the above-named 13th Plaintiff of Room 401 Entertainment Building, 30 Queen's Road, Central, Hong Kong, Chan Kwan Sheung, the above-named 14th Plaintiff of 27 Lyttelton Road, 4th floor, Hong Kong, Au Yeung Chung Oi, Betty, the above-named 15th Plaintiff of Flat B2, 8th floor, Granville Villa, Shiu Fai Terrace, Stubbs Road, Hong Kong, Lam Tsang Suk Yee, the above-named 16th Plaintiff of Park View Court, Flat B1, 1 Park Road, 17th floor, Hong Kong, Cheng Chi Chion, the above-named 17th Plaintiff of 1-9 Hill Road, Cheung Fat Industrial Building, 10th floor, Hong Kong, Li Yu Tung, the above-named 18th Plaintiff of 228 Yu Chau Street, 1st floor, Kowloon, Tsang Suk Yee, the above-named 19th Plaintiff of Park View Court, Flat B1, 1 Park Road, 17th floor, Hong Kong, Lock Cheung Helen, the above-named 20th Plaintiff of 9 Eastbourne Road, Chermain Heights, Flat A3, 7th floor, Kowloon Tong, Kowloon, To Sai Mui, the above-named 21st Plaintiff of 36 Kotewall Road, Emerald Gardens, D2, Hong Kong, Tsang Yuk King, the above-named 22nd Plaintiff of 26 Yuet Wah Street, Flat A, 10th floor, Kwun Tong, Kowloon, Loke Yip Ngoi Yan, the above-named 23rd Plaintiff of Cambridge Garden, Flat B, 11th floor, 20 Babington Road, Hong Kong and Ng Hoi Ming, the above-named 24th Plaintiff of 64-66 Wellington Street, Yue Wing Building, 8th floor, Hong Kong and take notice that in default of your so doing the Plaintiffs may proceed therein, and Judgment may be given in your absence.

WITNESS the Honourable Sir Geoffrey Briggs, Chief Justice of our said Court, the 7th day of November 1975.

J. R. OLIVER
Registrar. (L.S.)

Note:—This Writ may not be served more than 12 calendar months after the above date unless renewed by order of the Court.

Directions for Entering Appearance

The Defendant may enter an appearance in person or by a solicitor either (1) be handing in the appropriate forms, duly completed, at the Registry of the Supreme Court in Victoria, Hong Kong or (2) be sending them to the Registry by post.

Note:—If the Defendant enter an appearance, then, unless a summons for judgment is served on him in the meantime, he must also serve a defence on the solicitors for the Plaintiff within 14 days after the last day of the time limited for entering an appearance, otherwise judgment may be entered against him without notice.

STATEMENT OF CLAIM

1. By diverse agreements in writing particularised in the Schedule annexed hereto the Plaintiffs agreed to purchase and the Defendant agreed to sell various equal undivided parts or shares as particularised in the said Schedule of and in ALL THAT piece of ground registered in the Land Office as INLAND LOT NO. 8171 and of and in the messuages erections and buildings then in the course of being erected thereon and to be known as UNIVERSITY HEIGHTS (hereinafter called "the said building") in accordance with the plans and specifications approved by the Building Authority TOGETHER with the sole and exclusive right to hold use occupy and enjoy the various Apartments and car parking spaces as particularised in the said Schedule. 10
2. The purchase price payable under each of the said agreements is likewise particularised in the said Schedule. 20
3. By Clause 3(1) of each of the said agreements it is expressly stipulated that the Vendor shall comply with the requirement of the Building Authority and of the director of Public Works relating to the said building and shall complete the building within the period of 18 months from the date of issue by the Building Authority of a permit of commencement of building works.
4. By Clause 3(4) of each of the said agreements it is expressly stipulated that the Architect shall grant such extension of time for the completion of the said building beyond the said 18 months period as aforesaid (not exceeding in any event 365 days in the aggregate) as shall appear to the Architect to be reasonable having regard to delay caused by any of the manner stipulated therein. 30
5. By Clause 3(3) of each of the said agreements it is expressly stipulated that if the Vendor shall fail to complete the said building within the said period of 18 months as aforesaid (subject to such extension as may be granted by the Architect under the aforesaid Section 3(4)) the Purchaser shall have the option notwithstanding any extension of time or further period granted as aforesaid either to rescind this Agreement or to wait for the completion of the building in which event the Vendor shall pay to the Purchaser interest at the rate of one percent per calendar month on all amounts paid hereunder from the expiry date of completion of the building (subject to such extension as aforesaid) until the date of completion of the building. 40

6. Pursuant to each of the said agreements the Plaintiffs paid the deposits as particularised in the said Schedule.

7. The permit of commencement of building works was issued by the Building Authority on 17th November 1971.

8. The 18-month period for completion of the said building therefore expired on 17th May 1973.

9. Under Clause 3(4) pleaded above, no extension of time for completion would be granted by the Architect beyond 365 days in the aggregate from the said 17th day of May 1973 (i.e. beyond the 17th May 1974).

10. The said building has to date not been completed. 10

11. The Plaintiffs were at all material times and are able and willing to carry out their part of the bargain under the said agreements.

12. By a letter dated 20th August 1975 addressed to Messrs. Hwang & Co. the Defendant alleged that the said agreements had been frustrated.

13. By diverse letters dated 20th September 1975 and 27th September 1975 the Defendant repeated the said allegation and purported to return the deposits paid.

14. The Plaintiffs deny that the said agreements had been frustrated and have through their solicitors, by letters dated 24th September 1975, 2nd October 1975 and 21st October 1975 informed the Defendant's solicitors that in the circumstances as prevailing the Plaintiffs proposed to exercise the right to wait for completion and claim interest on the deposit paid in accordance with the said agreements. 20

AND THE PLAINTIFFS THEREFORE CLAIM:—

- (a) A declaration that the said agreements have not been frustrated;
- (b) Further and/or alternatively a declaration that the Plaintiffs were at all material times and are entitled under the said agreements to wait for completion and to be paid interest at the rate of 1% per calendar month on all amounts paid under the said agreements from the expiry date for completion of the building subject to such extension as permitted under the said agreements until the date of completion of the said building;
- (c) Further and/or alternatively payment of such interest as may be found due; 30
- (d) Further and/or alternatively a declaration that the Plaintiffs are entitled to be paid interest at the end of every calendar month computed at the rate aforesaid until the completion of the building;
- (e) Further and/or alternatively specific performance of the said agreement or damages in lieu;

Supreme
Court of
Hong Kong

No. 1
Writ of
Summons
endorsed
with
Statement of
Claim with
Schedule
7th Nov.
1975
(Contd.)

(f) Further and/or other relief;

(g) Costs.

(Sd.) Denis Chang
Counsel for the Plaintiffs

Dated this 6th day of November 1975.

SCHEDULE

Plaintiff	Date of Agreements	Premises Affected	Total Price	Amount of Deposits Paid	
1st	20/3/71	11/1613th parts or shares Apt. B2 on 6th floor & Car Parking Space No. 18 on Deck 'D'	\$112,875.00	\$112,875.00	10
2nd	20/3/71	11/1613th parts or shares Apt. B5 on 8th floor & Car Parking Space No. 32 on Deck 'D'	\$129,000.00	\$129,000.00	
3rd	27/5/71	11/1613th parts or shares Apt. A4 on 10th floor & Car Parking Space No. 32 on Deck 'A'	\$138,100.00	\$ 20,715.00	20
4th	29/5/71	11/1613th parts or shares Apt. B3 on 9th floor & Car Parking Space No. 1 on Deck 'A'	\$139,800.00	\$ 20,970.00	
5th	29/5/71	11/1613th parts or shares Apt. B5 on 6th floor & Car Parking Space No. 10 on Deck 'D'	\$145,700.00	\$ 21,855.00	
6th	29/5/71	11/1613th parts or shares Apt. B4 on 11th floor & Car Parking Space No. 1 on Deck 'D'	\$148,300.00	\$ 22,245.00	30
7th	29/5/71	22/1613th parts or shares Apt. A2 & A3 on 11th floor & Car Parking Space Nos. 5 and 6 on Deck 'A'	\$282,100.00	\$ 42,315.00	

Supreme Court of Hong Kong	Plaintiff	Date of Agreements	Premises Affected	Total Price	Amount of Deposits Paid	
No. 1 Writ of Summons endorsed with Statement of Claim with Schedule 7th Nov. 1975 (Contd.)	8th	29/5/71	11/1613th parts or shares Apt. A1 on 11th floor & Car Parking Space No. 2 on Deck 'A'	\$146,600.00	\$ 21,990.00	
	9th	29/5/71	11/1613th parts or shares Apt. B4 on 10th floor & Car Parking Space No. 7 on Deck 'D'	\$146,006.00	\$ 21,900.90	10
	10th	4/6/71	11/1613th parts or shares Apt. A4 on 8th floor & Car Parking Space No. 33 on Deck 'A'	\$136,400.00	\$ 20,460.00	
	11th	4/6/71	11/1613th parts or shares Apt. A3 on 9th floor & Car Parking Space No. 19 on Deck 'B'	\$138,900.00	\$ 20,835.00	
	12th	4/6/71	11/1613th parts or shares Apt. B4 on 6th floor & Car Parking Space No. 3 on Deck 'D'	\$144,000.00	\$ 45,000.00	20
	13th	4/6/71	11/1613th parts or shares Apt. B5 on 7th floor & Car Parking Space No. 9 on Deck 'C'	\$146,600.00	\$ 20,790.00	
	14th	4/6/71	11/1613th parts or shares Apt. B3 on 10th floor & Car Parking Space No. 31 on Deck 'A'	\$140,600.00	\$ 21,090.00	30
	15th	4/6/71	11/1613th parts or shares Apt. B3 on 8th floor & Car Parking Space No. 27 on Deck 'A'	\$136,400.00	\$ 20,460.00	
	16th	4/6/71	36/1613th parts or shares Apt. B4, B5 & B6 on 12th floor & Roof B4, B5 & B6 & Car Parking Space Nos. 12, 13 & 14 on Deck 'C'	\$400,000.00	\$ 73,500.00	40

Supreme Court of Hong Kong	Plaintiff	Date of Agreements	Premises Affected	Total Price	Amount of Deposits Paid	
No. 1 Writ of Summons endorsed with Statement of Claim with Schedule 7th Nov. 1975 (Contd.)	17th	4/6/71	24/1613th parts or shares Apt. A1 & A2 on 12th floor & Roofs A1 & A2 & Car Parking Space Nos. 11 & 12 on Deck 'B'	\$323,700.00	\$ 48,555.00	
	18th	4/6/71	11/1613th parts or shares Apt. B5 on 5th floor & Car Parking Space No. 10 on Deck 'C'	\$144,900.00	\$ 21,735.00	10
	19th	4/6/71	22/1613th parts or shares Apt. B1 & B6 on 11th floor & Car Parking Space Nos. 1 & 2 on Deck 'C'	\$280,600.00	\$ 42,600.00	
	20th	12/7/71	11/1613th parts or shares Apt. A2 on 9th floor & Car Parking Space No. 17 on Deck 'B'	\$147,500.00	\$ 22,120.00	
	21st	12/7/71	12/1613th parts or shares Apt. A3 on 12th floor & Roof A3 & Car Parking Space No. 18 on Deck 'B'	\$158,500.00	\$ 23,775.00	20
	22nd	5/11/71	11/1613th parts or shares Apt. B2 on 7th floor & Car Parking Space No. 3 on Deck 'C'	\$146,700.00	\$ 22,005.00	
	23rd	18/4/71	11/1613th parts or shares Apt. A1 on 8th floor & Car Parking Space No. 15 on Deck 'B'	\$193,920.00	\$ 29,088.00	30
	24th	14/3/71	11/1613th parts or shares Apt. B4 on 5th floor & Car Parking Space No. 11 on Deck 'C'	\$192,780.00	\$ 28,917.00	

IN THE SUPREME COURT OF HONG KONG
ORIGINAL JURISDICTION

BETWEEN

WONG LAI YING	1st Plaintiff	
MAN CHIU TONG	2nd Plaintiff	
CHUNG YUK WA, AGNES	3rd Plaintiff	
LEUNG SHING KWAN, CHARLES and LAM SHUK HAN, MARGARET	4th Plaintiffs	
WONG MAN TAK and LUI LAI YING	5th Plaintiffs	10
KWOK ON PONG	6th Plaintiff	
TAM KWOK CHEUNG, NG TACK MAY and NG TACK MAY, Personal Representative of NG MAY LAN deceased	7th Plaintiffs	
CHAN KAI SHIU and LAI KWOK MEI, AMY	8th Plaintiffs	
TSENG HING YU	9th Plaintiff	
CHENG SI YIC and CHEUNG LAI SUN, JULIANA	10th Plaintiffs	20
LO KAM TO	11th Plaintiff	
LO KAI FAI	12th Plaintiff	
YIM YAN	13th Plaintiff	
CHAN KWAN SHEUNG	14th Plaintiff	
AU YEUNG CHUNG OI, BETTY	15th Plaintiff	
LAM TSANG SUK YEE	16th Plaintiff	
CHENG CHI CHION	17th Plaintiff	
LI YU TUNG	18th Plaintiff	
TSANG SUK YEE	19th Plaintiff	30
LOCK CHEUNG HELEN	20th Plaintiff	
TO SAI MUI	21st Plaintiff	
TSANG YUK KING	22nd Plaintiff	
LOKE YIP NGOI YAN	23rd Plaintiff	
NG HOI MING	24th Plaintiff	
v. CHINACHEM INVESTMENT CO. LTD.	Defendant	

DEFENCE AND COUNTERCLAIM

1. Paragraphs 1 and 2 of the Statement of Claim are admitted but the Defendants deny that the said Agreements or any of them were in subsistence as on the date of the writ herein. 40
2. Paragraphs 3 to 10 (inclusive) of the Statement of Claim are admitted. The Defendants will refer at trial to each of the said agreements for their full terms, true meaning and effect.

3. Pursuant to the said agreements the Defendants caused building works to be commenced on the said lot and by June, 1972 foundation of the lower block of the said building had been laid and framework had reached its 1st floor level.

4. On or about 18/6/1972 a massive landslip took place in the vicinity of the said lot by reason whereof

- (a) The eastern half of the building site of "University Heights" was covered with earth and rock debris to a height of about 25 feet.
- (b) Access to the said site was denied to the Defendants or its agents.
- (c) The site was occupied by the Public Works Department for a period of 5 months to conduct rescue and salvage works.

10

In the premises, the consent to the commencement and carrying out of building works given by the Building Authority on 17/11/1971 expired.

5. On 1/12/1972 the Building Authority authorized the Defendants to carry out clearance work and the removal of debris from the said landslip. In or about January 1973 the Building Authority authorized the Defendants to demolish the existing frame work and foundation of "University Heights" which was accordingly done.

6. Despite repeated requests by the Defendants and agents on their behalf the Building Authority has not up to the date of the writ herein renewed the said consent and the Defendants are obliged to stop all building works on the said lot.

7. By reason of the premises the performance of the said agreement became, without any fault on the part of the Defendants impossible and the said agreements were thereby frustrated and the Defendants were discharged from performance of the said agreements. 20

8. Further, each of the said agreements contain a Clause 22 as follows:

22. "It is further agreed that notwithstanding anything herein contained should any dispute arise between the parties touching or concerning this Agreement or should any unforeseen circumstances beyond the Vendor's control arise whereby the Vendor becomes unable to sell the said undivided shares and Apartment to the Purchaser as hereinbefore provided, the Vendor shall be at liberty to rescind this Agreement forthwith and to refund to the Purchaser all instalments of purchase price paid by the Purchaser hereunder without interest or compensation and upon such rescission and upon repayment of the instalments of purchase price this Agreement shall become null and void as if the same had not been entered into and neither party hereto shall have any claim against the other in respect thereof." 30

9. By reason of paragraph 7 hereof and pursuant of their rights under the said Clause 22, the Defendants through their solicitors by letters dated 20/9/75 and 27/9/75 gave the Plaintiffs and/or Messrs. Hwang & Co. their solicitors due notice of rescission and tendered therewith to each of the Plaintiffs Cashier Orders as parti-

cularised in the Schedule annexed hereto, such being the amounts of deposit paid by the Plaintiffs respectively under the said agreements, but the Plaintiffs and each of them refused to accept the same.

10. On the 20th December, 1975 the Defendants duly paid the said amounts into court and says that the said amounts are sufficient to satisfy each of the Plaintiffs of their claims herein.

11. In the premises, the Plaintiffs were not and are not entitled to maintain this action against the Defendants.

12. Paragraph 11 of the Statement of Claim is not admitted.

13. Paragraphs 12 and 13 of the Statement of Claim are admitted. 10

14. In answer to paragraph 14 of the Statement of Claim the Plaintiffs repeat all of the foregoing. If it is found that the said agreements had not been frustrated and/or rescinded by the Defendants pursuant to Clause 22 thereof. The Defendants deny that they are liable to the Plaintiffs in damages as claimed or at all.

15. Save as hereinbefore expressly admitted, each and every allegation contained in the Statement of Claim is denied as if herein set out and traversed seriatim. By reason of the premises, it is denied that the Defendants are liable to the Plaintiffs or any of them as claimed or at all.

COUNTERCLAIM

16. The Defendants repeat their Defence herein, by reason whereof the said 20 agreements and each of them had been frustrated and/or rescinded by the Defendants.

And the Defendants counterclaim:

- (a) A declaration that the said agreements and each of them have been frustrated.
- (b) Further and/or alternatively, a declaration that the Defendants were entitled under Clause 22 of the said agreements to rescind the same.
- (c) A declaration that the Defendants had by letters dated 20/9/1975 and 27/9/1975 rescinded the said agreements and each of them; and
- (d) A declaration that the Plaintiffs and each of them are not entitled to interest as claimed or at all.

(Sd.) C. Y. Lee 30
Counsel for the Defendants.

Dated the 19th day of December 1975.

SCHEDULE

No. 2 Defence and Counterclaim with Schedule 19th Dec. 1975 (Contd.)	Cashier Order No. C	Date	Bank	Amount	Name of Payee	
	133320	19/9/1975	Overseas Trust Bank Ltd.	\$ 21,735.00	Hwang & Co.	
	133321	"	"	\$ 28,917.00	"	
	133322	"	"	\$ 20,715.00	"	
	133323	"	"	\$ 48,555.00	"	
	133324	"	"	\$ 20,970.00	"	
	133326	"	"	\$ 42,600.00	"	10
	133329	"	"	\$ 42,315.00	"	
	133330	"	"	\$ 22,245.00	"	
	133331	"	"	\$ 21,090.00	"	
	133332	"	"	\$ 20,835.00	"	
	133333	"	"	\$241,875.00	"	
	133334	"	"	\$ 20,460.00	"	
	133335	"	"	\$ 20,460.00	"	
	133336	"	"	\$ 29,088.00	"	
	133337	"	"	\$ 20,790.00	"	
	133338	"	"	\$ 21,855.00	"	20
	133339	"	"	\$ 45,000.00	"	
	133340	"	"	\$ 22,120.00	"	
	133328	"	"	\$ 22,005.00	"	
	133325	"	"	\$ 73,500.00	"	
	133365	27/9/1975	"	\$ 21,900.90	Tseng Hing Yu	
	133363	"	"	\$ 23,775.00	To Sai Mui	
	133327	19/9/1975	"	\$ 21,990.00	Hwang & Co.	
				Total: \$874,795.90		

IN THE SUPREME COURT OF HONG KONG
ORIGINAL JURISDICTION

BETWEEN

WONG LAI YING	1st Plaintiff	
MAN CHIU TONG	2nd Plaintiff	
CHUNG YUK WA, AGNES	3rd Plaintiff	
LEUNG SHING KWAN, CHARLES and LAM SHUK HAN, MARGARET	4th Plaintiffs	
WONG MAN TAK and LUI LAI YING	5th Plaintiffs	10
KWOK ON PONG	6th Plaintiff	
TAM KWOK CHEUNG, NG TACK MAY and NG TACK MAY, Personal Representative of NG MAY LAN deceased	7th Plaintiffs	
CHAN KAI SHIU and LAI KWOK MEI, AMY	8th Plaintiffs	
TSENG HING YU	9th Plaintiff	
CHENG SI YIC and CHEUNG LAI SUN, JULIANA	10th Plaintiffs	20
LO KAM TO	11th Plaintiff	
LO KAI FAI	12th Plaintiff	
YIM YAN	13th Plaintiff	
CHAN KWAN SHEUNG	14th Plaintiff	
AU YEUNG CHUNG OI, BETTY	15th Plaintiff	
LAM TSANG SUK YEE	16th Plaintiff	
CHENG CHI CHION	17th Plaintiff	
LI YU TUNG	18th Plaintiff	
TSANG SUK YEE	19th Plaintiff	30
LOCK CHEUNG HELEN	20th Plaintiff	
TO SAI MUI	21st Plaintiff	
TSANG YUK KING	22nd Plaintiff	
LOKE YIP NGOI YAN	23rd Plaintiff	
NG HOI MING	24th Plaintiff	
v. CHINACHEM INVESTMENT CO. LTD.	Defendant	

**REPLY AND DEFENCE TO COUNTERCLAIM
REPLY**

1. Save and in so far as the same consists of admissions, the Plaintiffs join issue with the Defendant upon its Defence. 40
2. In reply to paragraphs 3, 4, 5, 6 and 7 of the Defence, the Plaintiffs repeat paragraphs 3, 4, 5, 7, 8, 9 and 10 of the Statement of Claim. The Plaintiffs further say that the Defendant did not cause amended site formation/access road plans to be submitted to the Building Authority until 11th July 1975, 11th August 1975 and

20th September 1975. Thus it had taken the Defendant well over 2½ years from the date when the Building Authority first authorized the demolition of the existing foundation of the said building to the submission of the amended plans. The Defendant well knew that no consent to commencement of work would be given by the Building Authority until the amended plans were submitted and approved.

3. It is denied that the agreements were frustrated. Further and/or alternatively the alleged frustration is by reason of the aforesaid matters self-induced.

4. Further, the Plaintiffs say that the project for the said building was and is not subject to the Temporary Restriction of Building Development (Mid-Level) Ordinance 1973, since the original plans were first submitted on 23rd June 1970 and approved on 8th September 1970. The said Ordinance only governs submissions after 4th July 1973. 10

5. In reply to paragraphs 9 and 11 of the Defence, the Plaintiffs say that the said letters dated the 20th September 1975 and the 27th day of September 1975 from the Defendant's solicitors to the Plaintiffs and/or Plaintiffs' solicitors did not have the effect of lawfully rescinding the said agreements. The Plaintiffs are entitled to and did by letters dated 24th September 1975, 2nd October 1975 and 21st October 1975 exercise their right to wait for completion and claim interest on the deposit paid in accordance with the said agreements.

DEFENCE TO COUNTERCLAIM

20

6. Save as hereinbelow expressly admitted, each and every allegation contained in the Counterclaim is denied as if the same had been herein set out and traversed seriatim.

7. The Plaintiffs repeat the Statement Claim and the Reply as set out hereinbefore.

8. In the premises, the Defendant is not entitled to any of the relief claimed or at all.

(Sd.) DENNIS CHANG
Counsel for the Plaintiffs.

Dated the 8th day of January 1976.

IN THE SUPREME COURT OF HONG KONG
HIGH COURT
ACTION NO. 2738 OF 1975

No. 4
Notes of
Evidence — BETWEEN
the
Honourable
Mr. Justice
Li

CHEUNG KUNG LEUNG
FOU YOU SING
and
CHINACHEM INVESTMENT CO. LTD. 1st Plaintiff
2nd Plaintiff
Defendant

Coram: Li, J.
Date: 24th October 1977 at 10 a.m. 10

JUDGE'S NOTES

D. Chang (Hwang & Co.) for plaintiffs
M. Miller, Q.C., C.Y. Lee (F. Zimmern & Co.) for defendants

Chang: By consent all actions to be tried together.

Sale and purchase agreements.

Instruction for sale.

Agreed bundle. Over 200 pages.

Refer to only few.

Consolidation.

Building 2 tower Bls. A and B refer as the building. 20

Building to be completed in two to three months' time.

No change in floor plans.

Identity each parcel same.

Agreement:

P35: Wong Lai Ying's agreement.
Apartment B2, 6th floor, Car park No. 18.

Paras:

3(1): 17/11/71 — permit to commence work
Under 3(1) Vendor had 18 months to complete — 17/5/73 complete. 30

3(2): At of the Purchaser to rescind.

3(3): At of the Purchaser to wait and plus interests.

3(4): Architect to give extension 365 days.

No certification as to time in this case.

Plaintiff willing to give 365 days — extend to 17/5/74.

No breach on part of purchasers.

17

22: Vendor's right to rescind in circumstances.

Plaintiff say Vendor must show that unforeseen circumstances had
arisen rendering vendor

(a) unable to sell the flat. 40

Must be inability to sell.

Not enough to say inability to complete building by a certain time.

(b) Rescission must be forthwith — not and sit back and reflect and
speculate.

Here no suggestion of frustration until 1975.

- Obligation of Vendor include that arising from Purchaser's discretion to wait.
Obligation to allow to wait and to pay interest.
- P86: Letter from Vendor to Purchaser dated 4/12/73
(a) Up till then Vendor expressed desire to proceed. Only matter of time.
- P120: Purchaser's letter to government 2/6/75 inquiry.
- P121: Another letter and one more question.
- P124: Reply from P.W.D.
- P129: Letter from Purchaser to Vendor as to payment of Interest.
- P130: Reply — Inaccurate as to freezing. 10
Allege frustration — But up to 20/8/75 still trying to develop.
Only frustration.
- P131: Another Reply 20/8/75.
Then raise Clause 22.
Just to remind Purchasers. Not exercising it yet.
- P135: Vendor's letter to P.W.D.
- P158: Reply from P.W.D.
- P142: Cheung Kung Leung 1st plaintiff in 2738/75 18/9/75
Claim rescission and interest before vendor purported to rescind.
- P143: Fou You Sing 2nd plaintiff in same action 20
Claim rescission and interest before vendor rescinded
- P145: Reply: Frustration
- P146: 18/9/75:
sent money back
- P147: Same as P146
- P150: Return money to others — refer to letter 20/8/75
- P152: Letter to vendor indicating prepared to wait. 24/9/75
- (P153: Two letters to two more purchasers
- (P154:
- (P155: Solicitors reply for two more purchasers 30
- P243: New Brochure
- Sale of land transaction — interest in land.
1. Frustration must be to extent of rendering Vendor unable to sell.
 2. Provision for Purchaser to wait or to rescind.
 3. Obligation of Vendor include completion of building and to sell even if completion delayed.
 4. Clause 3(2) gives Purchaser option to rescind.
 5. If Vendor exercised right forthwith — may be able to block Purchaser's right to special performance.

Adj. to 2.30 p.m.

Sgd. Simon F.S. Li

40

2.30 p.m. Resumes

Chang: See Chitty on Contract 23rd edition, Chapter 22 at page 585 and page 588.

1. Can Frustration apply in sale of land?
See Chitty at page 609
Answer — no page 609
Answer — no page 612.

Amalgamated Property v. John Walker (1977) 1 W.L.R. 164
at 170(F)
172(G)
175(A) (D)
176(F)

Pleadings:

Action No. 2738/75

1. At what date frustration occurred?

Miller: 1st June 1972 landslide.

2nd Access denied for period so long that building consent expired and necessity to renew — took long time — September 1972. 10

Second consent given December 1976

Chang: Claim interest up to 18/9/75.

Not disputed Temporary Restriction of Building Development (Mid level) Ordinance 1973 does not apply.

Second Action:

Similar points

Concede plaintiff able and willing to complete.

Leave to amend schedule as to date of contract for 23rd and 24th plaintiffs to 18/4/71 and 14/3/71 respectively. 20

Reservice dispensed with.

Burden of Proof:

1. Now rest with defendant because of admissions.
2. If Clause 22 applies, for defendant to prove fulfilment of conditions precedent. Not admitting frustration as independent ground.

Allen Robert Wilkinson (Sworn) P.W.1.

Lee Gardens Hotel Hong Kong. Charter-surveyor employed as Building Surveyor in Building Ordinance Office. In P.W.D. three years. A.M.R.I. Chartered Surveyors. Have custody of file relating to building site. Inland Lot No. 8171, Kotewall Road. 30

Know contents. Visited site. Personal knowledge. Produce file.

File — Exhibit A.

Chronology of events.

Building Authority concern 1st submission of plans — 22/6/70 — general plans.

No structural plans at first.

22/6/70 general plans

8/9/70 Approved plans

July 1971 Amended plans submitted

17/11/71 Permit to commence work

shortly after Work started 40

7/1/72 consent to amendment

3/3/72 consent to ramp structure and access road

2/6/72 consent to drainage work

18/6/72 landslide and work ceased

From record site buried in rocks and debris.
Area out of bounds for five months.
Government contractor to do clearance work.
25/5/73 — site cleared and completed.
Proposal of architect awaited.
Architect previously noticed that before consents lapsed
and would re-issue only on condition that architect further
send in further site investigation report.
This is
3/11/72 — letter to Architect — P67 10
But demolition and clearance work could be done
immediately as from date of letter.
Application to start removing debris and spoils — P68
22/11/72
Finished 25/5/73

Adj. to 9.45 a.m.

Sgd. Simon F.S. Li

Court resumes as before
25/10/77 at 9.45 a.m.

Allen Robert Wilkinson (R.F.O.) P.W.1
Initial consent lapsed because three months past. If work to resume 20
must have another consent. This is common due to delay in progress of work
in normal cases.
1/12/72 — P71 Consent given pursuant to architect's application.
Prior to that a letter 22/11/72 — P69 to chase architect.
16/1/73 — P72 Letter to chase architect to clear site

There was a gap between commencement of clearance work and May
1973.

14/12/72 Letter to defendant to chase architect to clear. Inquiry
why no progress in clearing site.

Chang: Ask to stand witness down. 30

Keith Charles Brian Boys (Sworn) P.W.2.
6 Mansfield Road, Hong Kong, Chief Geotechnical Engineer in Building
Ordinance Office. Chartered Engineer specialising in soils and rocks. With P.W.D.
for 11½ years. In June 1972 I was Highways Engineer and after landslide seconded
to deal with landslide problems.

I was involved with Po Shan Road landslide. Started on 16/6/72 to inspect
the site of slide. Know I.L. 8171 in the vicinity. Then transferred in Building
Office, in late 1972 early 1973 onwards to deal with this area. Thus involved with
I.L. 8171.

One file missing. But I am not concerned with the superstructure. Exhibit 40
A has no reference to the particular file. Exhibit A is the principal file.

From memory when I first saw the proposal of site 8171 which was late 1972 we were keen to have clearance of its eastern boundary because we felt there was a blockage of drains. This would, in event of future rain storm, cause further damage to properties. At same time we were aware of rear slope of this property not yet safely shored up.

I see P68 date 22/11/72. Kemmard was Chief Building Surveyor, Western. Anxious to clear the site and other sites.

I see P67, Para. 2 thereof and say I did advise on this letter particularly para. 3. From Exhibit A only one note written by me concerning spread footing of ramp structure of site 8171 on 8/7/75.

10

Cross-examination:

1. Know, when involved, plan awaiting for approval of slope in Kotewall Road site?
No. I moved into this work in October 1972.
2. Look at P64 letter 3/8/72 from defendant to Robson para. 2 was area in fact closed?
From memory, yes. Access difficult.
3. Would further building operation hampered government?
It would.
4. Soils dumped to defendant's site?
I don't know. All sites submerged difficult to differentiate which site boundaries blurred. 20
5. Until December 1972 wrong for defendant to work?
Not responsibility of our department.
6. P70 report of Commission?
Yes.
7. Gave evidence as to cause of landslide?
No.
8. Did you have opinion?
Yes. 30
9. What rain fall effect on land?
Heavy rainfall early May.
10. Effect?
Weakens soil and can be reduced to mud.
11. Soil heavily saturated in this instance?
Yes.
12. Reduced stability?
Reduced sheer strength and affected stability.
13. Your opinion heavy rainfall major cause of landslide?
Yes. Page 33 of P70. 40
14. Gave idea of slope behind site?
The material of slope was collusive i.e. transported material, slope wash basically previous landslide deposits.
Not inherently strong.
Residual volcanic nature.
15. Far to get solid rock?
In one hole as far as 90 feet. But varies from place to place.
16. Description as to stability of decomposed material?
Varies in strength between Colluvial and rock strength. Depend on

- how hardened and the slope face.
17. What is angle of slope?
About 35°.
18. Same as Kotewall Conduit Road?
No. Kotewall Road less steep.
19. Look at Appendix IX of P70; the dotted line indicate area of slide?
Yes.
20. Caused Kotewall Court to crash on client's site?
Yes. Part of it.
21. 61 persons died? 10
Yes.
22. Lots buried in debris for months?
True.
23. Possessions in debris?
Yes.
24. Any view Kotewall Court properly designed?
No.
25. Agreed with conclusion of Commission in para. 280 in P70?
No disagreement. I agree.
26. Force beyond expectation? 20
I agree, at that time.
27. How soon on site?
October 1972. Transferred to Building Office.
28. Photo Plate 10 in P70, from place look up to Kotewall Road?
Not certain.
29. Plate 11 taken same place after landslide?
Yes.
30. The building knocked off was Kotewall Court?
Yes.
31. One with corner cut off. Green View Gardens? 30
Yes.
32. Green View Court on east adjoining client's site?
Yes.
33. The constructions in Plate 11?
Foundation of one of blocks.
34. So badly damaged it had to be destroyed?
I understand so.
35. See P67 para. 4, asked for its demolition?
This is departmental view — not my personal view.
36. Earth and rock in Plate 11, from slip? 40
Yes.
37. Plate 7 shows debris converged on defendant's site?
True. Great amount of it.
38. Some 20,000 tons?
Can't refute or agree with it. No idea.
39. How deep on site?
Don't know.
40. 25 feet?
I believe that, in one or two places.
41. Possible to study the site strength on road below Kotewall Road with 50

- debris?
Not economically feasible.
42. Had to excavate down to contour?
Yes. 10
43. Had to excavate all places and up to 90 feet down from contour?
Correct, as far as possible.
44. Know if we did this work?
Subsequently.
45. Report in P100?
Yes. 10
46. You laid down locations of holes?
Consulted but not laid down.
47. Look at P66, defendant's architect equally concerned — (opposite)?
Seems so. From P66.
48. Duff anxious to proceed with work?
Seems to be so.
49. Quite contrary to P67?
No not same subject.
50. Mid December 1972 your defendant not complaining?
No. Man visited site on day, saw no work and reported. Work the next 20
day.
51. P67 — plan had to be resubmitted?
As far as I am concerned plan of site must be resubmitted for
consideration.
52. The retaining wall your 2nd concern?
Yes.
53. Then foundation of Block B erosion?
Yes. We will have to be consulted.
54. The bearing capacity of ground?
Yes concerned. 30
55. Also about drainage on site?
Concerned with any infiltration of water in the soil. Not the drains
myself.
56. Site formation generally?
Yes.
57. Site formation need your approval?
No. I merely advise on approval.
58. Site formation had to be reconsidered?
Yes — See para. 3 of P67.
59. What is involved in site investigation? 40
Investigate through bored holes to find out material of slope, to find
out if retaining wall safe, if foundation could stand. Also to investigate
the ground water, to locate it. Water examination caused reading
water fluctuations on the site though not actually essential.
60. This work of examination could not be undertaken until site put in
condition when more holes could be made?
Yes.
61. Down to April 1973?
Yes.
62. Could not be done quicker? 50

63. Won't say that. But quick enough and had no complaint.
Police inspected every load?
Yes.
64. Had to do contiously for workmen's safety?
Yes.
65. Difficult site and could use only one bull dozen and one loader?
Correct.
66. Earliest moment clearance work could commence to investigate soil test
required?
Prefer to say it was carried expeditiously. 10
67. Strength of your branch put to great stress?
Few people in this line of work.
68. Recommendation in Para. 304 of P70 implemented?
Yes.
69. Look at P100 — report of Consultant; you read it?
Yes.
70. Had they considered the right matters?
Yes.
71. Until you done work not sure if save to build on site?
Correct. 20
72. No one could know without doing such work?
In my opinion, no. No one can say otherwise if in our profession.
73. This in August 1974?
Yes. I had a hand in this report.
74. In August 1974 met Elliott and Duff?
Yes.
75. Duff said you got report and he wanted to build?
Yes.
76. You said wanted time to study report?
Can't remember. Without notes I can't answer. Have to know the 30
circumstances and the date of the meeting.
77. At the meeting professional opinion differ between you and Duff?
Not aware of details. I did ask for an advanced programme from him.
78. Duff suggested a flexible plan?
Can't recall. Might have said so.
79. On 21/1/75, Elliott sent Wong to meeting?
All laboratory tests done by Dr. Wong.
80. Meeting with Dr. Wong to discuss report?
Yes.
81. You wanted more water recordings?
Without notes can't say. 40
82. You would not recommend consent to building till further data obtained
as to subsoil conditions in P119?
People in this field used sophisticated method. Satisfied with first
report. This was more details. I might have imposed requirement of
this report.
83. Appendix I to P119 show position of bore holes?
Correct.
84. Those four holes D1 — D4 purpose?
To investigate as to the foundation. 50

85. Without this the foundation Block B could not be built?
Consult thought should do this work we agreed. Holes A-E ordered by Scott Wilson to satisfy investigation as to safety. But I stated concern as to requirement of investigating foundation to Scott Wilson. They, as result ordered boring holes D1 to D4.
86. N-100 value good for foundation?
Depend on how designer load his foundation. Use of N value carried out principally. Not our happy practice.
87. Unless done boring hole do not know what foundation is necessary?
That is so. 10
88. From Hole C to Hole 3 is a 35°?
About that.
89. Steep slope?
Not our concern.
90. It was caisson structure for protection of neighbours?
Steep cuts involved. Necessary for development of site. Not for safety — secondary.
91. If no precaution would affect slope?
It would.
92. When hole results available then can suggest caisson structure? 20
Yes.
93. If not could cause another slide?
No comment. Only suggest safety measure.

Adj. to 2.30 p.m.

Sgd. Simon F.S. Li

2.30 p.m.

Miller: Parties able to agree to certain facts.

Hand up to Court agreed paper as to record of admission.

Mutual admissions. This eliminate a number of matters. Argument as to how far they extend. 30

Boys (R.F.O.)

Cross-examination continued:

94. Reach report April 1975 and amended modified June 1975 with Appendix VI of report by Scott Wilson — water records?
Yes.
95. Water level of hole A in Appendix VI?
Yes.
96. Level high by end of October 1974?
Yes.
97. Suggest to you level of water affected by factor other than precipitated? 40
Yes.
98. In Hole C, great increase near end of October?
Yes.
99. Rain fall chart show wet weather in October?
Yes.
100. Want to comment?
Show there is small lack in storm. Rise of level caused by rain fall.

- Can be used as guide accepted by design.
101. What effect water level had on your mind?
Deduce from that where water lies. Take measure to ensure stability.
102. To enable Block B being built on this level?
Yes. The erosion at that corner had under cut the foundation.
103. In fact, the June report not final version of Scott Wilson report?
No.
104. In July 1975 supplementary report?
Yes.
Report — Exhibit B. 10
105. Where to look to find caisson design?
All caisson design.
106. Caisson most closely placed in southeast corner?
Yes.
107. The closely placed group dictated by steepness of slope?
Yes.
108. This is to stabilise entire slope?
Yes.
109. Caisson essential to safeguard slope?
At the time, yes. Though difficult and expensive. 20
110. Your department refused to entertain application for resumption of building till slope rendered safe?
Not aware of that. Only advised on slope work. Not advised building work withheld.
111. Consider safe for Block A to start before slope caisson effect?
Refer to document P126.
112. You one of civil engineers?
Yes.
113. Many consultations?
Yes. 30
114. Entirely acceptable?
No. Item 5 required modification. That is because Block B had been described as Block A. We required square footings to Block B.
115. The caissons referred to in paragraph 8 of P126 same as square in Figure 2?
Yes.
116. Letter in P133, B Authority 23/8/75 told Duff to cease work?
I recall this. Item to make site safe. Small works. Not to suffer in priority only.
117. Yet work had to stop? 40
Yes. To render founder safe.
118. See P165 letter 24/11/75 refers to P133?
Yes.
119. Look at enclosures — Form 14 in P165 is this original?
Yes.
Form 14 — Exhibit C.
120. Caisson works given consent in November 1975?
Yes.
121. Under your supervision? 50
Only by way of spot check.

122. Caisson had to be done one by one?
Yes.
123. How deep holes each caisson sunk?
Can't say.
124. About 60 feet or more?
Yes.
125. How to lay it?
Excavate a hole to size of caisson to put it down.
126. Making a larger hole?
No. At same size of caisson. 10
127. Encounter boulders?
Yes.
128. If so, what you do?
No explosive used. Use drill. Process slow.
129. Size of boulders likely.
Can be large — matter for contractor.
130. Look at P240, history of work done?
Yes. Stopped by June 1972.
131. As from 29/11/75 additional caisson wall?
Yes. 20
132. Mid May 1976 under pinning work at your request in letter?
Yes.
133. The file found?
One deals with site formation. File on structure not yet found.
File on site formation — Exhibit D.
134. Look at entries on 19/12/74, can you find anything relating to that meeting?
No.
135. What about the meeting on 21/1/75?
First report here is comments on meetings rather than record of meetings 30
starts from 1969.
136. In November 1972 when your department allowed defendant bank on its site, consent to rebuild would not be given till after test of soil?
Correct.
137. You kept open mind?
Yes, that it was possible to build the building provided proper safeguard taken to investigate the buildings provision.
138. If test found soil not suitable to build on, then no consent?
We didn't know if design done was adequate. Whether 20 storeys or 3 storeys. 40
139. Uncertainty continued till investigation finished?
Correct.
Without soil test and investigation no way to approve any plan for a building of any substantial size.

Adj. to 9.45 a.m.

Sgd. Simon F.S. Li

10.00 a.m.

Resumes:

Boys (R.F.O.) P.W.2.

Cross-examination continued:

140. File BOO, CE (175) — 12 Babington Path.
item 7.
This file special, CE(R1/75) opened on 27/1/75 about
12 Babington Path.
File — Exhibit E.
141. Look at Item 7, what is date? 10
24/1/75.
142. That your own file?
Yes.
143. You made it on 24/1/75?
That I can't be sure. On or about. May be same day.
144. Read it?
Read. It is a dictated note. Include items not discussed with Duff or
Scott Wilson.
145. But show your attitude? 20
Yes.
146. Had in mind water saturation not studied to your satisfaction?
Yes.
147. Had not sufficient information of soil on site?
Correct.
148. You in doubt if caisson foundations or any foundation at all could be
employed unless reach down to rock?
Correct.
149. Part of site, bored hole tested then carried out showed rock not reached
even at 80 feet? 30
That is right — fresh rock had not yet been found i.e. not decomposed
rock.
150. You suggested foundation down to fresh rock had to go down to below
80 feet?
Correct.
151. Fresh rock is grade 3?
Yes. 6 grades of hardness.
152. Can you identify this document?
Yes. I help to draft it.
Document — Exhibit F.
Circular letter to all authorised architects. I in fact wrote it. 40
153. That Exhibit F reflect departmental policy in 1972 at your advice?
Yes.
154. From experience learned of landslide and Commission Report?
Yes.
155. Authorities attitude as to safety on sites like 12 Babington Path one of
extronie caution?
I prefer to say reasonable attitude which had been missing before.
156. Stringent request justified?
Yes, indeed.
157. In Exhibit F, basis of your letter 3/11/72 to defendant? 50

- Yes.
158. Look at P70 paragraph 121 any reason to doubt estimate there?
None.
159. All debris on defendant's site?
Some at higher level as you can see from Plate 7 of P70. Substantial part on the site.
160. Look at P242, statutory declaration of Duff in paragraph 11 says several thousand truck loads of debris removed?
No.
161. Look at P62, can you indicate defendant's site? 10
Mark in red.
162. Below that, large rectangular objects what are they?
The spread footings installed for old foundation.
163. Was that result of erosion?
No. They stand clear as result of soil removed from them.
164. Above it white triangle — Kotewall slope?
Yes.
165. Nullah main drainage of hill side?
Yes.
166. By May 1973, could start soil investigation? 20
Correct.
167. Look at P70 paragraph 294, do you agree with conclusions therein?
Yes.
168. Risk applied to defendant's site?
Yes.
169. Your requests guarded against that risk in letter 3/11/73?
Yes.
170. That lasted to 1975?
Yes.

Re-examination:

30

I see Exhibit F, (circular letter) in 1972. The criteria to be followed by all authorised architects. Necessary and reasonable requirements. Present ruling far more stringent.

I see P70, paragraph 306 familiar with circular letter No. 27 and paragraph 26. I do not agree with the specifies though generally for small sites of no significance the contents in paragraph 26 reasonable.

In the site the angle of cutting was 30° the slope was 35°. It was an old wall there. Cutting minor and existed before the landslide. Then there was intended cutting to provide access from Kotewall Road after landslide. It is a cutting of down to 24 feet. It was part of the original plan for site formation. But no first hand knowledge. My job was to press on with project to recommend a decision on basis of this cutting. The plan was 22/6/76. 40

P126 letter from Duff to B Authority dated 10/7/75; paragraph 7, it is correct record. Paragraph 10 of same talk of structural plans.

Miller: Admit plan submitted but not yet approved before landslip.

Re-examination continued:

Most details settled at that stage though no plan had been submitted as far as I was concern they could proceed safely subject to certain precautions for safety.

By November 1972 Commission sat. I was familiar with that site. I had reached some empirical judgment. It concerned only safety side. Not with particular development in mind. Not applied wind to building. Just to make safe the site. Knew of proposed building on site.

Adj. to 2.30 p.m.

2.30 p.m.
Boys (R.F.O.) D.W.2.
Re-examination continued:

My concern was to deal with immediate situation and that should seek fresh rock at site. Immediate works required. Practical judgment was if wish to develop must do something about site investigation and of vicinity. Also concern with big buildings along the site. This was to ascertain structural work and necessary data of the design. Professional experts required such investigation — greater depth. 10

Building could be built provided proper safeguard taken. The proposed building on site not unusual except its covered by debris.

Condition of site in May 1973 such that soil test could be carried out with view of building of given design to be erected. The result in report went into details — which grew as we required further details. Rejected first report as not sufficient details. Added requirements Duff, chartered engineer. Duff's opinion was he could build the building. My opinion was that it had to be shown. 20

I see P240. Chart of progress. Observer of ground water levels. I could assume certain level of water saturation. Not absolutely necessary to watch water level for whole year. But advisable to qualify the assumption. Possible to do work first and then qualify earlier guesses and assumption. During this period soil test also made. By May 1975 we had clear idea as to soil condition of the site. By end of May 1975 also knew what requirements to render the site safe in view of the soil conditions.

Item 7 of Exhibit E my own notes. Not every detail conveyed to other parties.

In Commission Vail considered any building more than 3 storeys must reach fresh rock. My opinion only required a sound base e.g. Caisson — without reaching absolutely fresh rock. Eventual solution was that if analytically we can ensure safety of structure fresh rock need not be reached. 30

I see letter 3/11/72, P67. It was based on circular letter Exhibit F. Letter was to ensure Duff knew what my requirements were. At time general resentment to new expertise brought in. People thought they were more expert than the new expertise. Caissons quite usual in Hong Kong in 1972 — I was told.

I see Exhibit D at Folio 24 ceased work order 23/8/75. No idea why without Dangerous Building File.

To Court: Know all plans submitted prior to landslip. By May 1973 clear debris and soil tests could be done. Tests and further tests as to conditions and requirements for safety with designed building in mind. By May 1975 agreements had been reached in engineering philosophy and the basis for design of foundation and retainment with building and access in mind. Plans submitted. We insisted on priority of remedial work in August 1975. 40

I put in up-to-date plans in one bundle.
Bundle of Plans — Exhibit G.

Cross-examination:

1. Your job?
Area Surveyor of area covering the site one week before to-day.
2. Prior to that?
Peak area.
Prior to this nothing to do with site. 10
3. How long in Peak?
2½ years.
4. Prior to that site area?
Went there only once. Concerned for about two weeks. Went there end of 1974. No work done.
5. Saw hore holes?
Not remember.
6. Went not for tests?
No. Paid a number of visits to area to inspect if site safety. Visited site once. 20
7. Is view in P62 similar to what you saw of site in 1974?
Can't remember.
8. Satisfied as to safety?
Yes. But only concerned if area properly fenced and offer no danger to public.
9. Concerned with building permits — Form 14?
Yes, part of my duties to issue permits.
10. Yours a general character?
Yes.
11. May call on other professional experts? 30
Correct.
12. What request?
Request plans to be in details — full dimension of building, information in component parts, degree of reinforcement, amount of steel and cement and calculation for foundation.
13. Exterior finish?
Not concerned at all.
14. At what stage concerned?
In some cases only when it is regulated by Crown lease.
15. Interior finish? 40
Only to insure building habitable.
16. Other requirement regarding inside?
Not that I can think of.
17. Have they done so in present case?
No. Only basic features of building.
18. Matters of finish or materials used other luxuries left to architect?
Unless such affect safety, outside our jurisdiction.
19. Thus developer may according to specifications approved?
Yes.

20. Within a design approved, developer free to choose matters of quality and finishing?
Correct.
21. Great range of variety — in degree of luxury but all complied with P.W.D. requirements?
Yes.
22. The difference in costs depending on finish can be enormous?
Yes.
23. Can you tell difference in \$ per sq. ft.?
I can't. No up-to-date data. 10
24. Know what stage the building reached?
Expect application for occupation permit in next 3 to 4 months.
25. When visited?
5/8/77 last visit.
26. Not since then?
No formal record of such.

Re-examination — nil.

Chang: Defendant admits.

1. Defendant at all material times the registered owner of the suit property. 20
2. The apts subject matter of action, had not been sold to others.
3. The contractor for the job is at all times an associate company of defendant and under control of defendant.

Miller: Confirm.

4. Present market value of the price originally paid. Damages to be dealt with by separate inquiry if damages to be awarded.

Documents material and put in Miller consents to all documents in as part of plaintiff's case except P224.

The plaintiff's case.

Admissions: 30

1. Landslip, a natural disaster unforeseeable.
Thus matters outside cover of provisions of contract.
Parties can't contract by reference to event outside scope of foreseeability.
2. As result: not possible to complete building before 1/10/76.
Original — complete 17/5/73.
Architect can extend 365 days.
Time essence of contract.
Impossibility of completion by 17/5/73: impossible for defendant to comply with its obligations — not even before June 1974. 40
Time is of essence.
In fact possible date was 1/10/76.

If not completed building by June 1974 then fundamental breach of condition unless defendant discharged by unforeseeable and natural disaster. Defendant in breach of bargain unless released.

Fundamental breach entitled each plaintiff to accept our failure to perform i.e. as one of repudiatory character discharging them from any obligation to complete later; and further entitled each of plaintiff to bring action for damages.

See: Harold Wood Brick Co. Ltd. v. Ferries (1935) 2 K.B. 198.

Each contract by Clause 3 gave plaintiffs additional rights — to rescind or to wait for completion and asked for damages — see Clause 3(3).

These additional rights.

Defendant liable for damages as from 17/5/74 for failing to complete by then even though defendant not at fault and impossible to complete building even though delayed by unforeseeable natural disaster. 10

Only protection to defendant afford by Law of Frustration or Section 22 of the agreements.

No general statement on Frustration.

See: Herji Malji v. Cheong Yue Steamship Co. (1926) A.C. 497 — whole case!

Facts of frustration leading up the dissolution of contract.

Charity party not started when ship requisitioned.

Hence this case storm! Landslide made completion of contract impossible. 20

Implied term to be imposed on intervening cause.

1. Rely on Landslide.
2. Completion of building impossible.
3. Landslide created condition impossible to tell whether the building envisaged by contract could be built on this site.

Restrictions since that date. Policy even more stringent now.

The letter, taken together with policy bound to create in mind of recipient a state of doubt which the designed building could be built at all.

Evidence of Boys — couldn't tell in 1972 if he would give consent to proceed with building. 30

Lord Summer's principle.

P35.

Contract obligation more than merely conveying the land.

Here vendor had to make the property before selling it.

It is a building contract coupled with a conveyancing element.

Adj. to 9.45 a.m.

Sgd. Simon F.S. Li

10.00 a.m.

Miller: Impossibility of Performance. 40
Possibility of building — mere impossibility within contract not suffice to establish Frustration.

We submit:

1. Call to build — contract
2. Parcels to be sold include

- (a) specified shares of uncompleted building
 - (b) exclusive right of occupation of a flat to be constructed by defendant.
3. If as result of unforeseen circumstances it becomes impossible to complete building than that event create impossibility of complying with our contract.

e.g. Restaurateur to serve supper not later than certain time. If the restaurant in which meal to be served should sink. Then impossible to cook in time or to serve meal in time.

Essence.

That is what happened now.

If after survey then restaurant opened five years after plaintiff presents himself to be served. Demand service.

10

It all depends if landslide at defendant's risks. Question is one of construction. Cause of delay wholly unexpected catastrophe — unforeseeable disaster.

Parties do not and can't contract by reference to event which are unforeseeable. Contract provided for extension of time in case of delay by Act of God. But maximum extension permitted was only 365 days.

Question: Does that extension provision demonstrate parties contemplated maximum delays for which they need provide would amount to one year? Or does it mean that every delay however excessive or be it caused by wholly unforeseeable disaster would entitle his clients to wait forever — say 40 years — before calling on defendants for refund of their money with interest at rate of 1% per month or for special performance plus interest.

20

If latter be true the result is because of frustrating event it can't be said by defendant event frustrated contract. Submit former attribute to the parties a set of intentions which one could not reasonably suppose them to have had and which could not have been objectively considered the intention of any reasonable man or a reasonable contractor.

Parties did contemplate:

- 1. It would be reasonably practicable for building to be built, barring accidents, in 18 months. Period of contract and time of essence.
- 2. Without fault of builder, completion might be delayed by a number of events separately itemised in Clause 3(4) of contract — causes beyond vendor's control. To meet that eventuality architect may extend time of not more than 365 days in any event.

30

Thus if event prevented building beyond extended time viz 17/5/74 defendant must be held to be in fundamental breach of contract though the entire delay attributable to events over which he had no control at all.

Admitted that delay down to 1/10/76 arose by reason of an impossibility created by an unforeseeable natural disaster.

40

Parties could not contemplate such events:

Fundamental right of plaintiff to claim damages despite provisions in Clause 3 of contract.

Doctrine of frustration applies to building contracts.

See: *Metrop Water Board v. Dick Kerr & Co. Ltd.* (1918) A.C. 119.

If satisfied this is building contract, legal result is contract frustrated.

As result (direct) of disaster it became by November 1972 wholly uncertain whether (if so when under what conditions) the building could be built. This turns contract to one of a fundamentally different kind — a game of dice.

There is also the question of contemplated building costs, how long job is to take.

Also the lapse of consent to work outside contemplation of parties. Whole contract turned to be different.

Government expert — November 1972 formulated Government policy — P67. Consent not given till Government satisfied that the building could be safely built.

At the time, though Duff believe we got building approved, Boy's opinion was it must be shown first building was safe.

As late as January 1975 — Item 7 — shown Boys thoughts — still uncertain if building could be done at all — referring to existing building as planned — but for money and time.

Question was whether the original building could be built on designed foundations. In January 1975 not certain.

See P126: Only by May 1975 it was known that building could be built. Subject to two more requests concerning the foundation.

Caisson to support to access road and to support the slope below Kotewall Road.

Boys has power to insist.

See Building Ordinance Cap. 123.

Section 14(1)

Section 16(1)(i) 16(1)(m) 16(3) 16(4)

Section 17 (Item 7 in Column A) — power to impose conditions.

Section 20 — Consent lapsed in three months

Condition on renewal.

1. Our original design not viable. There had to be underpins Block B, put caisson in Block A and redesign slope.

2. Until we have down work of research called for, could not know what we might have to do — might have to demolish foundation of Block B — in Boys mind in January 1975 — Item 7 of Exhibit E.

Thus the contract became a game of dice by November 1972 as result of the landslide. Question was what design or work to be done to satisfy Boys.

Another questions: How long all these would take what work to be done.

How long it takes to do then.

Costs of such work — if work carried in unascertained date.

Now:

Metrop. Water Board case (1918) A.C. 119. Engineer could extend time as long as he liked — yet frustration.

(Present case 365 days only)

See at page 125-126

129-130

131 and 137-138.

Contract laid down time. Delay as such made it impossible to perform within time despite extension. Impossibility of performance.

Order in Board's case caused difficulties.

In present case Act of God caused Government to take certain action made performance of contract uncertain.

Parties did not contemplate occurrence of landslide; 5 months out of site. Lapse of consent.

Clause 3(4) provides for Act of God.

But not to affect position because situation never contemplated by parties.

1. Act itself — act of God
2. Consequence of it — lapse of consent
— uncertainty of being able to build.

Comment on:

Davis Contractors Ltd v. Fareham U.D. Council (1956) A.C. 696.

1. Only on shortage of labour — builder's risk within contemplation.

10

Adj. to 2.30 p.m.

Sgd. Simon F.S. Li

2.30 p.m.

Miller: 2. No devastating event as present case to make contract impossible — see Headnote page 696

Facts: P700-701

P703

P714

P717

20

Present case, event can be named

Landslide June 1972. Letter November 1972.

P721

P723

P731

No longer on basis of implied terms but on basis of happening of frustrating events.

Distinguish:

Amalgamated Investment and Property Ltd v.

John Walker and Sons Ltd. (1977) 1 W.L.R. 164 — see at 176(F)

30

Present case not question of a sale.

At time writ was issued defendant did not even obtain consent to build.

1. Ignore fact we have to build the building
 2. Ignore fact we could not start
 3. Future uncertain
 4. Never be able to complete obligation despite extension of time
- Thus by November 1972, at the latest, doubtful if we could comply with contract in time.

Question of Clause 22: Wrong to pursue

If invoke must give notice forthwith

Accept plaintiffs argument

Abandon this point.

40

Cross-examination of Wilkinson:

1. Certainty of work to be done was vague and obscure as to requirements.

2. Not practice of authority to require finishing details. Nor details given in this case.
3. Building not confined to shell of building. Various grades of fittings and fixtures. If special performance it means order to carry out work not defined by contract at all.
Such require supervision of the Court.

Carpenters Estates Ltd. v. Davies (1940) 1 Ch. 160 at 163.

Statutory Declaration by Duff.

This is Duff's evidence.

Wong Tak Fai (Affirmed) D.W.1.

10

Of 67 Beaconfield Road, Kowloon. Director of Defendant Company. Been so for more than 15 years. Authorised to give evidence for company.

Duty include buying land, see construction works carried out, decide on price on sales when development come to market.

Our company has built more than 100 multi-storey buildings — mostly on flat ground but five or six on slopes. Big difference between the two types. Main difference: work more difficult and take longer time to finish work on slopes. More expensive — involves cutting and shoring. No academic qualification.

To reach price have to find out prevailing selling price in the area and the building costs incurred and selling within a year or two. To find out if profit available. 20

University Heights:

We acquired land in 1969. We paid set out in P187 about $1\frac{1}{4}$ million and \$0.6 million for Crown land. After modification value of land went up to \$7 million because developable to 165,000 sq. ft. of floor area. At that time floor area sold at \$40/sq. ft. Reckon building costs at \$40 to \$50 per sq. ft. Could be sold at \$120 per sq. ft. We worked on margin of 30% to 40% gross profit. Total development cost about \$16 million. Gross receipt from sales at list price about \$20 to \$22 million.

When planning our development we projected our costs forward to $1\frac{1}{2}$ years. In calculations we take present costs and give a 10% allowance. Chi Fung our contractor and our subsidiary. No profit allowed to Chi Fung. Take about one year to build. 30

We dare not look ahead too long. We look for fast turnover to make quick profit. Long delay means loss of control of labour, material costs. Also tied up our capital.

Come to landslide. Before that we completed 1st to 2nd floor of car park level of lower block and doing high block foundation — starting excavation. Wet month. Had put in \$2 million in construction work at that stage.

Then landslip in June 1972. Shut out in 1972 November. I saw P67, the P.W.D. letter on 3/11/72. When I got it, I felt I didn't know if the building work could ever be restarted then. After we got reports from consulting engineers I began to feel it could be done. 40

I see P86, Alan Kwan wrote it A director. Letter sent out on 4/12/73 after discussion. We offered customers alternative accommodation at a discount — I had in mind 10% to 15%. Still hope to get building built without knowing when the building could be completed.

I was not too happy with progress made with Building Authority. From business point of view not happy about delay.

Cross-examination:

1. Look at P187 Condition 4 well aware of cutting condition?
Yes.
2. Your job to make hillside safe?
Yes.
3. Costs of this varies from site to site?
Yes.
4. Heard of costs of retaining wall in Hong Kong Gardens?
Yes.
5. Very high? 10
So much so they go to another consultant.
6. Thus costs a matter of luck?
Not in our site in first place before landslide.
7. You submitted retaining wall plan for access road?
Our architect did so.
8. Experts show you cases where original estimate of building costs wrong because of events beyond control?
We allow 10% to 15% as leeway. Never exceeded this.
9. Know of developer suffer loss because of difficulties in site formation work? 20
Very few.
10. Any project delay in 1967 riot?
No delay.
11. Any one suffered?
Only those in fear and packed up.
12. You advertised sale of these units?
Yes.
13. Gave particulars of the site and amenities?
Yes, in 1971.
14. Advertised two private swimming pools and that completion take in March following year (i.e. March 1972) and that monthly interests be paid in case completion date overdue. 30
Advertisement — Exhibit H.
15. At advertisement had no permit to commence work yet?
Correct. It is on 21/2/71.
16. Started selling even before 1971?
Can't remember.
17. As result people came to purchase?
Yes.
18. They sign instruction forms like in P7? 40
Yes.
19. Then sale and purchase agreements by F. Zimmern & Co. on your instructions?
Yes.
20. In P10 — 16/2/71 first payment of \$24,570 that day?
Yes.
21. These sums you obtained before you had consent to commence building?
Correct.
22. Thus you never kept to your completion date March 1972? 50
Correct.

23. Why late?
Must be plans wrong.
24. Suggest you put in amended plans long after approval of original plan?
No. Nothing to do with amendment.
25. Can't comply with advertised date?
May be delay due to wet weather.

Adj. to 9.45 a.m.

Sgd. Simon F.S. Li

9.45 a.m.

Resume

Wong Tak Fai (R.F.A.) D.W.1.

26. There is another instruction in P9 of 23/11/70?
Yes. 10
27. By latter part of November 1970 you began to sell?
Yes.
28. Began to receive deposits?
Yes.
29. There is element of financing by Purchaser?
I disagree because the amount deposit very small.
30. How much in P9? 20
\$20,000.
31. Financing collectively?
Correct.
32. Purchasers have little protection?
I disagree.
33. Look at Remarks in P9 or P10 enabling Vendor to rescind?
Yes. But normally as soon as instruction form signed purchaser will go to solicitors to sign agreements. Date of agreement might be left vacant by clerk of solicitor.
34. Sold before you got permit to commence work? 30
Yes.
35. You submit general plans first?
Yes.
36. Then started to sell?
Yes.
37. Before structural plans submitted?
No. Architect submit general plan. Then start to work on R.C.C. plan.
38. Before approval of structural plan you started to sell? 40
Yes.
39. Before drainage plan you sold?
Yes.
40. Even after started to sell still had not you structural plans approved?
Correct.
41. Sometime architect might find amendment of plan (structural) substantially?
Yes.
42. In Hong Kong access road problem — constructional often happen?
Not true. Simple part of the R.C.C.

43. Cutting slope could encounter difficulty?
No. Never had such problem before.
44. Heard of retaining wall problem?
No.
45. No problem at all?
The Building Office always reject plans on the first submission for small reasons.
46. In development field always hazard and elements of uncertainty?
To a certain degree, yes.
47. All these boom and bust you take the risk? 10
To a certain degree but not all the risk.
48. Also pass risk to contractors?
Yes.
49. Who did the site formation work?
Chi Fung, our subsidiary.
50. Who did it after Landslide?
Chi Fung.
51. Specialist contractors employed by Chi Fung?
Yes.
52. Who? 20
Shum, a Leung Kee.
53. Entered into lump sum contract?
Before slide, yes. After slide no.
54. Building contract with Chi Fung?
No.
55. Architect gave extension of time?
Yes.
56. If no contract, how and on what basis extension of time given?
To owner and Chi Fung.
57. Have time limit for Chi Fung to complete work? 30
Yes, 18 months.
58. On contract?
No.
59. No written document?
No.
60. Chi Fung get paid as work in progress?
No.
61. If did not complete limit penalty?
No.
62. Architect or you gave extension of time to Chi Fung? 40
No.
63. Any purchaser had say in choice of contractor?
No.
64. They knew who you employed as contractor?
I don't know.
65. Not expected them to know?
Can't understand.
66. Any one had any say as to time for completing work?
We tell clients when building completed if happy they buy.
67. Delays frequent? 50
No with private projects only Government project.

68. Delays in completion projects fairly frequent in Hong Kong?
Not too frequent.
69. Aware delays could be more than 4 years even before landslide?
Only a few.
70. That is why in your sales promotion you made a point to tell buyers they would get interests in case of delay?
That is one of the things we tell them.
71. Look at P2, price list advertised prompt completion otherwise interest paid?
Yes. 10
72. As months went by you revised prices?
Yes.
73. Look at this, first brochure published?
I think so.
Brochure — Exhibit I.
74. There gave a run down of materials used?
Correct.
75. Give expectation to purchasers?
Yes.
76. Including finishings? 20
Yes.
77. If delay should pay interests on deposit?
Yes.
78. Are the sort of person to hang on purchaser deposits if you come to the conclusion that project could not be completed?
No. I am not.
79. Not sort of man who would hold on to deposits if you had reasonable doubts about your ability to complete project at some time?
No. I am not.
80. In present case, up to September 1975 you had no reasonable doubt 30
your company could complete the project at some time?
I had that doubt.
81. When you returned deposit?
Can't remember.
82. September 1975?
Yes.
83. Why, if had doubt?
We handed papers to Zimmern & Company for advice.
84. You never had any doubt?
I disagree. 40
85. Look at P86, aware of contents?
Yes.
86. Agree with it?
Yes.
87. Look at paragraph 2, correct?
I think so.
88. Paragraph 3, expressing confidence correct?
50/50. Partly salesman's talk.
89. Your option never offer return of deposit at all?
Correct. 50

90. Offer 10 or 15% of list price?
Yes.
91. List price always reflect current price of market?
Yes.
92. Look at P243, look at price, succeeded in selling any flat?
Yes.
93. You believe the price listed on July 1977 reflect market value of the day?
Yes.
94. Not put up price in order to test the market? 10
I disagree. We sold quite a few flat. Could not give date of completion. They shied off before signing agreement.
95. Look at P109, Letter from Ford Kwan and Company to Building Authority 4/4/75, passed on to you?
I don't know. I don't think so.
96. Look at P111 of 23/4/75 from Ford Kwan & Company to your company aware of it?
Yes.
97. Look at P112, who is T.H. Wang? 20
Me.
98. Look at P113, your letter of 25/4/75 to Ford Kwan & Co., sales talk or correct?
Also a 50/50.
99. Refer to letter you wrote to Scott Wilson at P97, on 27/4/74, Alan Kwan? Our director then.
100. The contents — by April 1974 no doubt Scott Wilson could produce report at that stage?
We have been chasing them like anything.
101. You agree with letter? 30
Yes.
102. No serious doubt in April 1974 that you would be able to proceed with the project?
We had hope. But we had lot of doubts whether we could put it or not.
103. Here in 1972?
Yes.
104. When allowed to go to site, first thought debris had to be moved?
No. Had to find out what is P.W.D.'s reaction.
105. Had thought of clearing site?
Duff said it would be difficult to deal with Government. Never such a huge landslide. Did not know what P.W.D. would do from thereon. 40
106. You were anxious to find out how much time it took to clear sight?
Correct.
107. Your solicitors wrote to Building Authority in P63 on 23/6/72?
Yes.
108. Asked when you could go back?
Yes.
109. At P64 another of your solicitor's letter?
Yes.

110. Thus in August 1972 you kept close watch to project time when you could resume work?
Yes.
111. See P65 reply from P.W.D. (read), Government removed some debris from your site?
Yes.
112. In August 1972, clearance on your site started?
Can't remember.
113. See P66 letter from Duff to P.W.D. on 27/10/72, does his attitude reflect yours? 10
Yes.
114. Duff had no serious doubt but liked to find out when?
He had lots of doubt and was worried by then.
115. What doubt?
He told me that was a most complicated job in his life. He had all the confidence but worried if Building Authority would endorse his thinking.
116. See P67 letter 3/11/72; happy to see letter?
No. Conditions laid down made it almost impossible for Duff to do the job acceptable to P.W.D. 20
117. You have doubt to Duff's competence?
None.
118. That is why took months to employ consultant?
Correct.
119. You had no doubt Duff could competently carry out the investigations set out in the letter 3/11/72?
None. He is well qualified. But he said whether his proposal would be accepted by P.W.D. He was very uncertain.
120. You took as a matter to be sorted out by experts? 30
Yes.
121. That can be solved if you can right engineering solution?
Correct.
122. Whatever misgivings of his on technical matter you employed no consultant?
I left full job in his hands.
123. Felt he could deal with it?
Yes.
124. See P69 letter to Duff, 22/11/72, seen this before?
Yes.
125. When consider the next wet season? 40
March 1973.
126. Told you to get on?
Correct.
127. Did you get on with the work?
I don't work.
128. See P240, shows periods of work on site, observation of ground water long period?
Yes.
129. If Duff told you to employ Scott earlier you would do so? 50
Yes.

130. Gap of one year?
I disagree, at the time few knew of consultant before slide.
131. Could employ consultant January 1972 and January 1973?
Yes.
132. There was a mid-level freeze which did not affect your site, was your site one of few not affected?
I don't know.
133. Know of another similar site?
The Hong Kong Gardens, and one other in Po Shan Road.
134. Yours few not affected? 10
At the time nobody look at mid-levels from commercial point of view.
135. Did that deter you?
No.
136. As time went by site became more and more valuable?
Generally correct.
137. Chi Fung a wholly owned by defendant?
Majority owned.
138. How is that did job at costs?
That is because it had a contractor's licence.
139. Question 138 repeated? 20
We carried on like that for long time.
Chi Fung started as investment company. Had no staff. We got contractor's licence in name of Chi Fung. We continued to use name of Chi Fung on paper.
- To Court: Chi Fung in fact Chiuachun.
140. Defendant could employ another contractor?
Yes.
141. Look at P131, one of letters to offer to purchaser — on your instructions?
Yes.
142. Look at 2nd page — by August 1975 you had no doubt that you will 30
able to complete project at some time?
True.
143. Had no intention of stopping now?
No.

Re-examination:

P131, letter 20/8/75, negotiating with government still at that stage. Up to September 1975 not yet received any consent to such redevelopment. In fact 3 days after received a cease work order in respect of site. Can't remember when it was lifted. Could not tell on 20/8/75 when we could execute project work because no consent to start. 40

Difficult site formation. The Building Authority did not make up mind to O.K. it or not. My attitude at that time that no interest payable because counsel advised contract no longer binding on our part and we could call it off.

Not prepared to pay interest for future as from 20/8/75. This again on counsel's advice. We had to a different building entirely than the building we sold.— retaining wall different, foundation to Block A different (the under pinnings) Block B had to modify the old foundation. Had to do lots of things under foundation. For foundation of Block had to put caissons almost down to rock — 60 feet to 70 feet deep.

Caissons five feet to six feet in diameter. Diameter of shaft therefore about five feet.

From building point of view, much more difficult than we embarked before.

I sell no apt in University Heights after June 1972.

Up to June 1972 we sold about 49—50 flats. Returned payment to 15 clients.
Peaceful settlement. Effect no sale up to 1976. Resumed attempt to sell in July 1977. That is because we could at last know when building could be completed.

As to letters in P63, P64 and P65, at date I gave those instructions to write them I had no knowledge that consent to build had lapsed or that P.W.D. required extensive investigation of soil before work to be resumed.

In October 1972 P66 Duff wrote complain of P.W.D. delay, still not told of the aforesaid two points — i.e. new consent required and soil investigation required. No idea at all P.W.D. to write on 3/11/72. 10

Adj. to 2.30 p.m.

Sgd. Simon F.S. Li

2.45 p.m.

Resume.

Look at P67 letter 3/11/72. Discussed it with Duff. Trusted Duff to carry out investigation because of his experience as civil engineer. No idea at time how long investigation of soil would take.

P76, Scott quoted term P77 accepted them. Then P78 enclosed agreement with budget limit. When Scott Wilson engaged no idea how long investigation would take. 20

P83, Kwan to Scott Wilson 31/10/73 chased after report. This written after discussion with me. I was senior to Kwan and was the boss.

Now in April 1975 plaintiff's solicitors wrote to Building Authority and to us. I saw that letter at the time. We then wrote to Scott Wilson. In P101, on 4/9/74 wrote authorizing Wilson to exceed the budget. P103 account and P118 account.

In April 1975 I wrote in P112 because I had not received Scott Wilson's report. When I received letter P111 from Ford Kwan & Co. I replied on 25/4/72 in terms of P113. What I wrote was true. 30

The instruction forms P7—32. The Chinese indicated swimming pool cancelled. P9, no such written cancellation. Earlier clients had swimming pool provided. Later clients found upkeep too much. We followed wish of our later clients.

I see the S/C Schedule — set out dates on which contracts dated. Contracts on same line with usual contracts. I have received from Architect for extension time in other contracts.

No one who had shares in Chi Fung without having interest in Chiwachun.

Subpoenae revoked.
Hung Kwok Keung
Dr. H.Y. Wong
Mr. S.G. Elliott
Mr. Yu Ching
Mr. C.M. Guildford

40

Defence Case.

Miller: Evidence of Mr. Wong not relevant in law.
Approach: Metrop. Water Board case
Court to form opinion.

Lord Simonds: Mix questions of law and fact.

Court entitled to look at conduct of the parties especially when it throw lights to intention and attitude of parties:—

- (a) To discover what is factual and substratum of bargain
- (b) The purpose of (Herji Mulji case 1926)
(See P509) finding their views of the event.

10

Know and experience of Court. Do not need evidence of Wong as to the commercial practice and the frustrating events.

In the Davies Contractor's case — Lord Morton said it is a question of law. Thus Wong's evidence is de bene esse. Nothing to do with this case at all. To answer criticism.

Ask to reject plaintiff's criticism. Wong an experienced prudent and dependable man of business. Guiding spirit of a successful company. Over 100 buildings. Extension of time only one case out of ten. Determined to get on with job. Admitted reasonably practicable to finish building by 31/12/76. Plaintiffs admit also not reasonably practicable to have building completed earlier than 31/12/76. Also concede delay after 31/12/76 not defendant's fault.

20

Elliott's firm short staffed. Duff was thought sufficient. Both no fault of ours. But accept them as inevitable burden — risk of contract.

The now one arrive at impossibility date. As soon as possibility occurred and if built should finish by 31/12/76.

1. We say landslide made agreements totally different from original ones.
 - (a) Direct and immediate difference — the job we had to do before 1972.
 - (b) The commercial difference.
 - (c) Job we had to do.

Contract fundamentally different for all three reasons.

30

(a) Factual

- (i) Company earth deposited on our site.
- (ii) 66 dead in that debris.
- (iii) Physically excluded from the site till November 1972.
- (iv) Building consent lapses.
- (v) Foundation damaged by the landslide and loss of earth around it.
- (vi) Superstructure damaged and had to be demolished to ground again.

Damage caused \$2 million.

All these wholly unforeseeable. Took us to end of April before that we could get on job again. Then months lost as result of landslide itself. Completion could only be effected on a day long past the extension date. Then Boys laid down the necessary but stringent condition. Letter 3/11/72. Must find out:

40

What is it intended to mean.

What meaning it did convey.

What it did convey to corporate mind of Chinachun.
Thus building could not be built till Boys thought it's safe to build it or
accepted how its going to be built. Matter of construction.
Letter demanded further plans for approval.
It contained no promise. Not a question of formality.
Had to convince Boys or to safety.

Duff formed opinion the building could be built though had to get Boys
agreement to do so. Express this difficulty to Wong. All Wong had was hope.
His evaluation of risk has been proved.

When saw 3/11/72 letter must be nightmare to Wong.

10

1. Uncertainty if building get built at all.
2. Couldn't say what had to be done in order to build it.
3. Couldn't know how long investigatory and design work would take.
4. Couldn't say the costs.
5. Or how long the job would take.
6. Or what building job would cost.
7. No telling as to market condition.

Such are the factual elements.

Works:

1. Clearance work
2. Demolition work
3. Redesign foundation of both blocks and the access road.
4. Underpinned foundation of Block B and redo foundation of Block A
(caisson)
5. Work on slope — to ensure safety.

20

These jobs are quite different from the work to be done under the contract.
This is true case of frustration though took us sometime to appreciate the legal
result. This is so despite provision for extension of time, for right to wait. At C.L.
plaintiffs could sue 14/5/74. Impossible of performance.

It is a building contract — construction work to be done. Selling and building
part not severable.

30

Remedy:

Special performance — no detail of finishes.
Brochure no help — not part of contract.

Adj. to 10 a.m.

Sgd. Simon F.S. Li

31/10/77 at 10 a.m.

Chang: Ask to go back to Sales and Purchase agreement.
P35.

1. Bargain between parties — construe document as whole language.
No doubt as to bargain — sale and purchase in land and building in course
of erection.
Not a building contract.
Bargain involve passing of interest in land and in building in course of

40

erection to be completed in 18 months.

- (a) Failing completion by certain date Clause 3(2) — refund and interest.
- (b) Wait and with interest.
- (c) Provides expressly for such situation and eventuality.
Already envisaged and provided for in agreement — viz: delay by act of God etc.
- (d) Vendor abandoned can express term.
Asks to be discharged because of frustration — an implied term.

See Clause 3 of Agreement
Clause 3(2) — refund
Clause 3 (4).

10

From Purchaser's point of view:—

1. No say in fixing time for completion — entirely fixed by Vendor.
Purchaser would not have to look at the site condition.
2. More concerned with when completion would take place and, if not in time, what would be their right.
3. Not concerned as to grounds — substantial of extension. Architect given power to decide. No means of checking. — trust to extent of 365 days.
Protection of purchasers.
When it comes to Act of God, the more substantial the force, the more reasonable for Architect to define. 20
Act of God defined: — unforeseen, most serious act. There is arbitrary element in Clause 3(4) in that no provision for events which caused delay of more than 365 days. By artificially limiting time the parties must have envisaged a situation where the work required more time.
Thus this extension Clause differed from that in a building contract.
Thus parties did envisage events which could not be provided for by artificially limiting the extension of time.
viz: Even if you required more time you are limited by fixed extension. If beyond that I, Purchaser, can expect compensation. 30
4. Clause 3(2) limits Purchaser's right to claim interests only and rescission.
Not to claim damages.
5. Alternatively Purchaser can 'wait' — maxim express unis exclusio alterius.
The waiting for completion implies building work not abandoned.
If work abandoned then Purchaser may be able to sue for damages.
The waiting in present case was a meaning for wait — not waiting for eternity.
6. Clause 3(4) has already provided for even the most unpredictable events.
7. Only case of frustration is lost of site, or inability to sell because of Government orders. 40
— Even this provided for by Section 22 refund without interest.
8. The parties tried to be as comprehensive as possible to cater for all eventualities
— Allocation of risks by this bargain. These two parties not stand on parity. So in the allocation of risks use words to cover all eventualities in very wide terms as in Clause 3(4).
9. If for any reason if not complete Purchaser's right spring into being.

Wrong to proceed on basis building by definite date is be-all and end-all agreement!

1. Parties bargained for Sales and Purchase agreement. The provisions merely to support this agreement in this nature.
Clause 5: no date fixed as such for the sale and purchase.
2. Since we waited we can expect completion by passing balance of purchase price as soon as occupation permit granted. No set date as to when completed building.
3. Sale of a building in course of erection.
Emphasis is on purchase of an interest in land. 10
4. Vendor can insure, no concern of the purchasers.
5. Vendor had already applied their land to delays and made provision to protect itself from having to pay interests at earlier date.
6. Developing and rendering building safe is at vendor's risk (e.g. manufacturing goods for sale?) Purchasers wanted to acquire interest in land.

Wrong to regard as building contract!

1. Owner employs contractor to build on his land — gemmie building contract. Not the building element that counts — this is the fundamental error.
Obvious passing interest in land with building element. 20
Different from: *Metrop. Water Board v. Dick Kerr & Co. Ltd.* (1918)
A. C. 119 .

Measure and value contract is not a cost plus contract. It means a lump sum price — measure the quantity, item of each work fixed and pay a proportion of the price.

Actually a lump sum contract based on fixed amount for measured quantities.

In that case extension of time no benefit to contractor because there is no different in rate of price.

Language of their contract not in as wide term as the one in our case. 30
See P124 and P128. Order made work illegal and debarred the work.
Compulsory dispersal of contractor.

Present case: Nothing to make performance of contract illegal.

Only a matter of difficulty by site investigation.

Also no admission that interruption so long and indefinite as to render new contract.

2. In the *Metrop.* case the Board retained interest in land. Contractor merely agreed to do the job for a price. That is risk contractor took as to price. The person who knows usually bear the risk. Contractor couldn't be assumed to have taken risk of being dispersed. 40
3. In interpreting the word "difficulties" Court used *ejusdem generis* rule P134.
In present case: 3(4) (i): *ejusdem generis* does not help defendant to exclude risk from Act of God.
4. *Metro's* case:
Illegality, absolute prohibition throughout to root of excluding risks.

No freedom to act in entire contract — not freedom to part of contract.
Absolute prohibition.

P137 — facts important.

5. Metro's case — No time limit for extension.
Present time — artificial limitation of time shows parties assume risk as
to time element. Here the defendant took the risk.

Adj. to 2.30 p.m.

Sgd. Simon F.S. Li

2.30 p.m.
Chang:

Artificial limiting time means vendor applied his mind and prepared to take
the risk. Contrary to think left at large. 10
Davis Contractors Ltd v. Fareham UDC (1956) A.C. 696. Again a
building contract. Even so can be used for argument.
Usual personalty clause.
Court considered on what basis contractor tendered for job. P714 — 715.
Knowledge-wise — defendant vendor in this case equated with that of the
contractors.
Vendor had all the dates. Could make the conditions P733.
See: Hudson's on Building Contract P348 and P358.
See: Clause 22 of Agreement in present case. The vendor could get 20
itself out of difficulty if acted in time. Instead chose to take the risk.

The ground conditions — facts.

1. The event, looked purely as physical fact, prevented clearance of site.
Reasonable to expect a wait of few months after June 1972.
2. By 3/11/72 clear as to what had to be done — purely engineering work viz:
clearance, precautionary work, soil test. No change of obligation. Even
at start Vendor had to undertake such work. Only difference is that more
difficult to do all these because of landslide. Vendor had to deliver a
safe building anyway.
3. Boys said in evidence nothing impossible. Only a matter of designing 30
the right foundation for the right structure. If necessary investigation and
engineering the building could be built.
4. Landslide caused temporary stoppage — not impossibility.
5. Comes back to one question "who has assumed the risk". In this case, the
vendor. They assume risk of not being able to obtain consent for
starting work on site because of engineering work required.

Uncertainty Point:

1. Grossly exaggerated as after thought.
(a) No one had doubt that the site could be built on. Only a matter of
time. 40
(b) Question was not "whether" but "when".
2. When letter on 3/11/72 received work could start subject to some engineer-
ing work required. That letter was to reduce the uncertainty — not to
create uncertainty.
3. So certain that defendant kept the deposits and payments.
4. Any work to ensure safety of site include the work on retaining wall. P187.

Formal Admissions:

1. The first paragraph expresses the principle the approach the court should take viz: who assume the risk?
 - (a) Parties can't contract by ref. of events outside scope of their contemplation. This proposition basically wrong.
 - (b) In present case the parties did precisely this and decided as to who assumed the risk. This is to be found in Clause 22 which provides for unforeseen circumstances rendering sale impossible. Clause 3(4) provides for circumstances beyond control of the vendor.
 - (c) No justification to introduce this notion of uncertainty.
2. Paragraph 3 of admissions — merely the physical structure to be completed.
3. Paragraph 4 not relevant. Defendant did not exercise Clause 22's right. Frustration ruled out by it.

10

Time of Essence:

1. If event prevent completion on dead line it has no ground to introduce frustration to save the defendant's position.
2. Time fixed merely to enable the plaintiffs to invoke power to rescind or to wait and claim interest.
3. Also binds the plaintiffs to complete within time after notice given.

20

In Summary:

1. Doctrine of frustration can only be applied to this type of contract in case of total destruction or total inability to sell.
Cricklewood case (1943) K.B. 493
(1945) A.C. 221
2. The present not one of those exceptional cases. Bargain for Sale of Building Circumstances has not rendered vendor incapable to complete the sale.
3. Even if doctrine applies to circumstances mentioned aforesaid, in present case no such exceptional event.
4. Parties already expressly provided for such unforeseen circumstances by Clause 22. Defendant abandoned it.
5. Defendant has no case independent of Clause 22.
6. Remedy — Court should declare agreement not frustrated and order special performance.

30

Building Contract:
Court's supervision:

We merely ask for sale — only to complete sale on completion of building.

Huji Murji case (1926) A.C.

1. Time charters. Not charter by demise.
No interest in the ship passing to the charterer.
Well recognised group of cases where doctrine of frustration applies to time charter parties.
2. No date in contract as to when ship to be placed at disposal of charterer. But set for 1/3/17.

40

3. When contract wholly executory requisition took march. This rendered contract impossible.
“Restraint of Princes” clause merely relieved owner to deliver on 1/3/77.

Arbitrator’s Jurisdiction:

3. Allocation of risk unforeseeable.
P509 — further prosecution etc.

Here only need to clear site — redesign.
Site not requisitioned.
There the ship gone.

Miller:

Hudson: also cited Metro’s case.

Jone’s case:

It is a case where time was of essence.

College recovered damages.

Plaintiff in present case has right to sue for damages.

Judgment reserved.

Sgd. Simon F.S. Li

10

3rd December 1977.
Coram: Li J. in Court.

Actions 2738 and 2739 of 1975.

20

Mr. Chang (Hwang and Co.) for plaintiffs
Mr. Miller, Q.C., and Mr. Lee (Zimmern and Co.) for defendant.

For reasons given judgment to plaintiffs counterclaim dismissed.

Chang: Ask for costs
Money in Court
In small action.

Miller: Extensive fact raised by plaintiff.
Facts succeeded.
Defendant successful in all facts.
Ask to release money to defendant.

30

Chang: Costs should follow event.
Not for plaintiffs to admit.

Miller: Not self induced frustration.

Chang: Because formal admission. No need to deal with this point.
No time spent on that.

Costs should follow events.

Costs to plaintiffs.

Time for compliance of longer action till conclusive of appeal.

Sgd. Simon F.S. Li

Supreme
Court of
Hong Kong

No. 5
Judgment of
the
Honourable
Mr. Justice
Li
3rd Dec.
1977

IN THE SUPREME COURT OF HONG KONG
HIGH COURT
ACTION NO. 2738 OF 1975

BETWEEN

CHEUNG KUNG LEUNG 1st Plaintiff
FOU YOU SING 2nd Plaintiff
and
CHINACHEM INVESTMENT CO. LTD. Defendant

ACTION NO. 2739 OF 1975

BETWEEN

WONG LAI YING 1st Plaintiff 10
MAN CHIU TONG 2nd Plaintiff
CHUNG YUK WA, AGNES 3rd Plaintiff
LEUNG SHING KWAN, CHARLES and
LAM SHUK HAN, MARGARET 4th Plaintiffs
WONG MAN TAK and LUI LAI YING 5th Plaintiffs
KWOK ON PONG 6th Plaintiff
TAM KWOK CHEUNG, NG TACK MAY and
NG TACK MAY, Personal 7th Plaintiffs 20
Representative of NG MAY LAN deceased
CHAN KAI SHIU and
LAI KWOK MEI, AMY 8th Plaintiffs
TSENG HING YU 9th Plaintiff
CHENG SI YIC and
CHEUNG LAI SUN, JULIANA 10th Plaintiffs
LO KAM TO 11th Plaintiff
LO KAI FAI 12th Plaintiff
YIM YAN 13th Plaintiff
CHAN KWAN SHEUNG 14th Plaintiff
AU YEUNG CHUNG OI, BETTY 15th Plaintiff 30
LAM TSANG SUK YEE 16th Plaintiff
CHENG CHI CHION 17th Plaintiff
LI YU TUNG 18th Plaintiff
TSANG SUK YEE 19th Plaintiff
LOCK CHEUNG HELEN 20th Plaintiff
TO SAI MUI 21st Plaintiff
TSANG YUK KING 22nd Plaintiff
LOKE YIP NGOI YAN 23rd Plaintiff
NG HOI MING 24th Plaintiff
and 40
CHINACHEM INVESTMENT CO. LTD. Defendant

Coram: Li, J.

JUDGMENT

In these consolidated actions all the 26th plaintiffs are purchasers of one or

Supreme Court of Hong Kong
No. 5
Judgment of the Honourable Mr. Justice Li
3rd Dec. 1977
(Contd.)

more units of flats in a building designated to be the University Heights at 12 Babington Path of I.L. 8171 of which site the defendant is the developer and vendor. They all signed a sales and purchase agreement (hereinafter referred to as the 'agreements') the material terms of which are practically identical with the defendant on various dates sometime in 1970/71. They have all paid a deposit or down payment to the defendant. The plaintiffs' respective shares and units to be acquired and the amounts paid to the defendant are set out in the Statement of Claim in Action No. 2738 of 1975 and the Schedule attached to the Statement of Claim in Action No. 2739 of 1975. At the time when the agreements were signed the said building was in the preliminary stage of construction. For the purpose of these proceedings the material terms may be set out as follows:

10

“Clause 3(1) The Vendor shall comply with the requirement of the Building Authority and of the Director of Public Works relating to the said building and shall complete the building within the period of eighteen months from the date of the issue by the Building Authority of a permit of commencement of building works.

(2) If the Vendor shall fail to complete the said building within the period as aforesaid or such further period as may be allowed under sub-paragraph (4) hereof, the Purchaser shall be entitled on giving to the Vendor not less than 14 days notice in writing in that behalf to rescind this Agreement and on the expiry of such notice this Agreement shall be rescinded and the Vendor shall repay to the Purchaser all amounts paid by the Purchaser hereunder together with interest thereon at the rate of one per cent per calendar month from the date or dates on which such amounts were paid to the date of repayment the payment of such amount and interest to be in full and final settlement of all claims by the Purchaser against the Vendor hereunder.

20

(3) If the Vendor shall fail to complete the said building within the said period of eighteen months as aforesaid (subject to such extension as may be granted by the Architect under sub-paragraph (4) hereof) the Purchaser shall have the option notwithstanding any extension of time or further period granted as aforesaid either to rescind this Agreement in which event the abovementioned provisions for rescission shall apply or to wait for the completion of the building in which event the Vendor shall pay to the Purchaser interest at the rate of one per cent per calendar month on all amounts paid hereunder from the expiry date of completion of the building (subject to such extension as aforesaid) until the date of the completion of the said building.

30

(4) The Architect shall grant such extension of time for the completion of the said building beyond the said eighteen months as aforesaid (not exceeding in any event 365 days in the aggregate) as shall appear to the Architect to be reasonable having regard to delay caused by any of the following, that is to say:—

40

- (a) Strike or lockout of workmen,
- (b) Bad weather,
- (c) Riots or civil commotion,

- (d) Force Majeure or Act of God,
- (e) Delay in completing the foundations due to water rock or similar obstruction or difficulty,
- (f) Delay in connecting drainage or water pipes in dealing with the application for permit of commencement of building works or occupation permit or attributable to the Public Works Department or any other Department or Authority concerned,
- (g) Default of contractors or subcontractors,
- (h) Act of the Queen's enemies and
- (i) Any other cause beyond the control of the Vendor.

10

12. Time shall in every respect be of the essence of this contract.

22. It is further agreed that notwithstanding anything herein contained should any dispute arise between the parties touching or concerning this Agreement or should any unforeseen circumstances beyond the Vendor's control arise whereby the Vendor becomes unable to sell the said undivided shares and Apartment to the Purchaser as hereinbefore provided, the Vendor shall be at liberty to rescind this Agreement forthwith and to refund to the Purchaser all instalments of purchase price paid by the Purchaser hereunder without interest or compensation and upon such rescission and upon repayment of the instalments of purchase price this Agreement shall become null and void as if the same had not been entered into and neither party hereto shall have any claim against the other in respect thereof."

20

On the 17th November 1971 the defendant first obtained the Building Authorities' consent to commence work on the spread footing of the lower block of the building. Consents to commence other stages of building work then followed. It is not necessary to cite them in detail. They are evident in Exhibit C. Suffice it to say that in the normal course of events the defendant would be required to complete the said building by 17th May 1973 under the provisions in Clause 3(1) subject to the maximum extensions which might be granted by the architect under Clause 3(4). By early June 1972 the foundation work for the lower block of the said building had been completed up to the first floor of the car park above it and some work had been done to form a retaining wall behind the upper block. In addition part of the foundation work of the upper block had been made. On the 18th June 1972 a landslip occurred in the area of Po Shan Road and Kotewall Road. As a result, tons of debris, rock and earth fell on the said site on which the said building was to be erected. Part of the site was 25 feet below the surface of the debris. Following this the defendant was barred from access to the said site to do anything until the 3rd November 1972 when the Building Authority wrote to the defendant's Architect in the following terms:

30

"It is now agreed that the work on adjoining and nearby sites and the investigations carried out by the P.W.D. have progressed to the point where work related to the redevelopment of I.L. 8171 could be recommenced. However it will be necessary for 'consent' to resumption of work to be obtained (in view of the delay of over 3 months) and this consent will not be issued until the project has been completely reconsidered and further plans have been submitted and approved.

40

It will be necessary for you to resubmit detailed proposals for safeguarding the stability of all land adjoining your lot particularly the hillslope below Kotewall Road on which your access road is presumably to be constructed. Your site formation and foundation proposals should be accompanied by supporting calculations and based on data obtained from a comprehensive site investigation. The calculations must also make allowance for fluctuations in the natural water table and the saturation of the surface soil, equivalent to at least the conditions experienced in June 1972. In addition the proposal should be supported by a construction programme and plans and notes clearly indicating the steps to be taken. This will prevent a dangerous situation materialising during the construction phase. 10

As you say in your letter, it is clear that parts of the structure, so far erected, are unusable and must be demolished. If it is your intention to retain any part of the structure (or foundations) I shall require to be completely satisfied that these parts are in no way affected by earth movement and that these parts can be incorporated in the building safely. Again this requirement must be related to the slope analysis data and comprehensive site investigations.

It will be apparent that I am not, at this stage, prepared to consent to the recommencement of works to erect structures, nor to any cutting or filling in or on the site contours as they were prior to June 18th. I would, however, be prepared to agree to allow the removal of spoil and also demolition works on approval of plans showing your intentions and I would be prepared to deal with such plans as a priority issue.” 20

Clearance and demolition work so necessitated began in January 1973 after a series of correspondence and consultation between the defendant’s architect and the Building Authority. In the meanwhile some boring work for soil test was done. It was not until June 1973 before the said site was cleared and reinstated to its original contour before the landslide. Between September 1973 and May 1975 a long series of soil tests and observation of ground water levels were undertaken on the said site by a firm of consultants employed by the defendant in order to satisfy the Building Authority as to safety requirements. In the process additional caisson walls were required to safeguard the access road and underpinnings required to secure the old foundation. As a result the renewed consent to resume building work was not given by the Building Authority until November 1976. 30

On the 19th August 1975 solicitors for the plaintiffs in Action No. 2379 wrote to the defendant in the following terms:

“We act for a number of purchasers of various individual shares in the above lot and of the building to be erected thereon.

On perusing the relevant Sale and Purchase Agreements, we note that under Clause 3(3) interest is payable at the rate of 1% per month in the event stipulated therein. We write to enquire whether you are willing to pay interest at the rate provided therein every month until completion of the building.” 40

Supreme Court of Hong Kong

No. 5
Judgment of the Honourable Mr. Justice Li
3rd Dec. 1977
(Contd.)

To this the defendant replied on the 20th August 1975 through its solicitors as follows:

“Your letter of the 19th instant to our clients, Chinachem Investment Co. Ltd. has been handed to us with instructions to reply thereto.”

On the 18th September 1975 solicitors for the plaintiffs in Action No. 2738 of 1975 wrote to the defendant two letters the terms of which were identical save the names and figures:

“We are instructed by our said client to give you notice which we hereby do that our client will after the expiry of 14 days rescind the Sale and Purchase Agreements dated 29th May 1971 and 20th September 1971 pursuant to Clause 3(2) thereof. Our client will upon the rescission of the said Agreements demand from you repayment of all amount paid under the said Agreements together with interest at the rate of 1% as stated below.” 10

The defendant replied as follows:

“We have advised our clients that the agreement between our respective clients is discharged as a result of its frustration thereof and pursuant to Clause 22 of the agreement. We enclose herewith our clients’ cheque for the sum of \$20,850.00 being a refund of the deposit herein. Would you kindly acknowledge receipt.”

On the 20th September 1975 the defendant through its solicitor also returned the deposits and down payments individually to each and every plaintiff in Action No. 2739 of 1975. The plaintiffs in Action No. 2738 of 1975 accepted payment without prejudice to their claim of interest under Clause 3(2) of the agreement. The plaintiffs in Action No. 2739 of 1975 held the cheques without prejudice to their claim for specific performance and interests under Clause 3(3) of the agreements. 20

The aforesaid facts are not in dispute and are supported by documentary evidence. By their Statement of Claim dated 7th November 1975 the plaintiffs in both actions found their claim on the terms of the agreements. They all claim for a declaration that the agreements have not been frustrated. The plaintiffs in Action No. 2738 of 1975 further claim interests due to them to be calculated in accordance with the provisions of Clause 3(2) of the agreements. The plaintiffs in Action No. 2379 of 1975 further claim specific performance of the agreements and for payment of interests to be calculated according to Clause 3(3) of the respective agreements. By their defence and counterclaim dated the 20th December 1975 the defendant pleads that as a result of the landslip in June 1972, the Building Authority had not, up to the date of the writ, renewed the consent to resume building work and by reason of this the agreements are frustrated and the defendant is discharged from performance. The defendant counterclaims for a declaration that the agreements have been frustrated and that the plaintiffs are not entitled to interests as claimed. In their Reply the plaintiffs allege that the defendant did not cause the necessary plans to be submitted to the Building Authority until August 1975 and/or July 1976 and as such there was no frustration and alternatively any frustration was self-induced. Perhaps I should add that in its original defence the defendant pleads the provisions in Clause 22 of 30 40

Supreme Court of Hong Kong
No. 5
Judgment of the Honourable Mr. Justice Li
3rd Dec. 1977
(Contd.)

the agreements and claims that in view of the unforeseen circumstances the defendant has the right to rescind the agreements to return the payments to the plaintiffs without interests and that the defendant did return such payments to the plaintiffs in September 1975. In the course of the opening of the defence case learned counsel for the defendant very properly abandoned this defence. As a result the only issue before me is whether the agreements have been frustrated in the circumstances. There is a subsidiary issue, in case I find that the agreements have not been frustrated, whether this is a proper case to order specific performance.

The doctrine of frustration in its application to the law of contracts has been subject matter for consideration by the highest judicial authorities in England. There is certainly no lack of guidance in principle. It is a question of applying the principle to the fact of a particular case. In the case of *Hirji Mulji and Others v. Cheong Yue Steamship Company Limited* (1926) A.C. 497 it was held that a charterparty for a period of ten months as from the 1st March 1917 was frustrated on the ship being requisitioned before that date. After reviewing the previous authorities Lord Summer said at page 507: 10

“An event occurs, not contemplated by the parties and therefore not expressly dealt with in their contract, which, when it happens, frustrates their object. Evidently it is their common object that has to be frustrated, not merely the individual advantage which one party or the other might have gained from the contract. If so, what the law provides must be a common relief from this common disappointment and an immediate termination of the obligations as regards future performance. This is necessary, because otherwise the parties would be bound to a contract, which is one that they did not really make. If it were not so, a doctrine designed to avert unintended burdens would operate to enable one party to profit by the event and to hold the other, if he so chose, to a new obligation.” 20

A more obvious example is to be found in the case of *Metropolitan Water Board v. Dick, Kerr and Company, Limited* (1918) A.C. 119. In that case it was held that a building contract to construct a reservoir within six years was frustrated by a notice given by Ministry of Munitions to require the contractors to cease work on their contract. 30

In his judgment at page 128 Lord Dunedin said:

“It is admitted that an interruption may be so long as to destroy the identity of the work or service, when resumed, with the work or service when interrupted. But quite apart from mere delay it seems to me that the action as to the plant prevents this contract ever being the same as it was. Express the effect by a clause. If the Water Board had, when the contract was being settled, proposed a clause which allowed them at any time during the contract to take and sell off the whole plant, to interrupt the work for a period no longer than that for which the work has actually been interrupted, and then bound the contractor to furnish himself with new plant and recommence the work, does any one suppose that Dick, Kerr & Co. or any other contractor would have accepted such a clause? And the reason why they would not have accepted it would have been that the contract when resumed would be a contract under 40

different conditions from those which existed when the contract was begun. It may be said that it is possible that plant may be cheaper after the war. But no one knows, and the contractor is not bound to submit to an aleatory bargain to which he was not agreed. It will also be kept in mind that the contract was a measure and value contract. The difference between the new contract and the old is quite as great as the difference between the two voyages in the case of *Jackson v. Union Marine Insurance Co.*”

At page 137:

“The question is one of contract law, and the decision in each case depends on the ascertainment of the true meaning of the bargain between the parties. If the parties have provided by apt words in the contract for their mutual rights or liabilities, in the event of the contract works being stopped, or indefinitely hindered by the operation of a subsequent law and such provision is not contrary to public policy, then it would be the duty of any Court to give effect to such provision. If, on the other hand, the contract contains no provision for such a contingency as the interference of the Legislature, then the Court must determine whether this contingency is of such a character that it can reasonably be implied to have been in the contemplation of the parties at the date when the contract was made. Care must always be taken not to imply a condition which would be inconsistent with the expressed intention of the parties.” 10 20

On the other side of the scale is *Davis Contractors Ltd. v. Fareham Urban District Council* (1956) A.C. 697. In that case it was held that an unexpected turn of events which rendered the contract more onerous than had been contemplated was not sufficient to frustrate a building contract. Lord Morton of Henryton at page 717 cited, with approval the following dictum of Morris L.J.:

“Though the basis or footing ‘of the contract was removed in the limited sense that the anticipations of the parties were not realized, the facts found do not require an implication in the contract that it was to come to an end if those anticipations were not realized’. It is, I think, impossible to hold that a contract has been frustrated unless it can be said: ‘As and from such and such a date, at latest, the contract ceased to bind the parties.’” 30

Lord Reid, having rejected the theory of implied terms and theory of “parties’ contemplation” as basis for applying the doctrine of frustration said at page 720:

“It appears to me that frustration depends, at least in most cases, not on adding any implied term, but on the true construction of the terms which are in the contract read in light of the nature of the contract and of the relevant surrounding circumstances when the contract was made. There is much authority for this view. In *British Movietonews Ltd. v. London and District Cinemas Ltd.* Viscount Simon said: ‘If, on the other hand, a consideration of the terms of the contract, in the light of the circumstances existing when it was made, shows that they never agreed to be bound in a fundamentally different situation which has now unexpectedly emerged, the contract ceases to bind at that point — not because the court in its discretion thinks it just and reasonable’” 40

to qualify the terms of the contract, but because on its true construction it does not apply in that situation.’ In *Sir Lindsay Parkinson & Co. Ltd. v. Commissioners of Works* Asquith L.J. said: ‘In each case a delay or interruption was fundamental enough to transmute the job the contractor had undertaken into a job of a different kind, which the contract did not contemplate and to which it could not apply, although there was nothing in the express language of either contract to limit its operation in this way.’ I need not multiply citations, but I might note a reference by Lord Cairns so long ago as 1876 to ‘additional or varied work so peculiar, so unexpected, and so different from what any person reckoned or calculated upon’ (*Thorn v. London Corporation*). On this view there is no need to consider what the parties thought or how they or reasonable men in their shoes would have dealt with the new situation if they had foreseen it. The question is whether the contract which they did make is, on its true construction, wide enough to apply to the new situation: if it is not, then it is at an end.” 10

The following passage in his judgment gives the true ratio of his decision when he said at page 724:

“In a contract of this kind the contractor undertakes to do the work for a definite sum and he takes the risk of the cost being greater or less than he expected. If delays occur through no one’s fault that may be in the contemplation of the contract, and there may be provision for extra time being given: to that extent the other party takes the risk of delay. But he does not take the risk of the cost being increased by such delay. It may be that delay could be of a character so different from anything contemplated that the contract was at an end, but in this case, in my opinion, the most that could be said is that the delay was greater in degree than was to be expected. It was not caused by any new and unforeseeable factor or event: the job proved to be more onerous but it never became a job of a different kind from that contemplated in the contract.” 20

Observing that the factor of delay is one of the instances of the circumstances which cause the principle of frustration being invoked Lord Radcliffe said at page 727: 30

“the principle of frustration, the origin of which seems to lie in the development of commercial law, is seen to be a branch of a wider principle which forms part of the English law of contract as a whole. But, in my opinion, full weight ought to be given to the requirement that the parties ‘must have made’ their bargain on the particular footing. Frustration is not to be lightly invoked as the dissolvent of a contract.”

On the question of delay he said at page 731:

“Two things seem to me to prevent the application of the principle of frustration to this case. One is that the cause of the delay was not any new state of things which the parties could not reasonably be thought to have foreseen. On the contrary, the possibility of enough labour and materials not being available was before their eyes and could have been the subject of special contractual stipulation. It was not made so. The other thing is that, though 40

timely completion was no doubt important to both sides, it is not right to treat the possibility of delay as having the same significance for each. The owner draws up his conditions in detail, specifies the time within which he requires completion, protects himself both by a penalty clause for time exceeded and by calling for the deposit of a guarantee bond and offers a certain measure of security to a contractor by his escalator clause with regard to wages and prices. In the light of these conditions the contractor makes his tender, and the tender must necessarily take into account the margin of profit that he hopes to obtain upon his adventure and in that any appropriate allowance for the obvious risks of delay. To my mind, it is useless to pretend that the contractor is not at risk if delay does occur, even serious delay. And I think it a misuse of legal terms to call in frustration to get him out of his unfortunate predicament.”

10

The case of *Amalgamated Investment & Property Co. Ltd. v. John Walker & Sons Ltd.* (1977) 1 W.L.R. 164 has not added any new principle. However, learned counsel for the plaintiffs relies strongly on the dictum of Buckley L.J. at page 173 to substantiate his contention that whichever party takes the risk in the contract cannot invoke the principle of frustration to relieve that party of the risk taken in the contract. At page 173 Buckley L.J. said:

“The purchasers in the present case bought knowing that they would have to obtain planning permission in order to develop the property. The effect of listing under the sections of the Act to which I have referred makes the obtaining of planning permission, it may be, more difficult, and it may also make it a longer and more complicated process. But still, in essence, the position is that the would-be developer has to obtain the appropriate planning permissions gone form of permission being the ‘listed building permission.’ The purchasers, when they entered into the contract, must obviously be taken to have known that they would need to get planning permission. They must also, in my judgment, be taken to have known that there was the risk, although they may not have regarded it as a substantial risk, that the building might at some time be listed, and that their chances of obtaining planning permission might possibly be adversely affected to some extent by that, or at any rate their chances of obtaining speedy planning permission. But, in my judgment, this is a risk of a kind which every purchaser should be regarded as knowing that he is subject to when he enters into his contract of purchase. It is a risk which I think the purchaser must carry, and any loss that may result from the maturing of that risk is a loss which must lie where it falls.

20

30

If I understand the aforesaid authorities properly the whole issue depends on the construction of the contract between the parties. Whatever theory one applies is only a difference in words. One must look at the occurrence of the event which is alleged to have frustrated the contract and find whether provisions had been made in the said contract for such eventuality. If it had then the rights and liabilities of the parties will be determined by the provisions in the contract. If not, then one would have to find whether the said event was foreseeable by the parties at the time of the contract. If the said event is foreseeable then the consequences of it should fall on the party who took the risk without making provisions for it in the contract. If it is not foreseeable one would have to find whether the occurrence of the event has caused the performance of the original contract such a change in character so that it becomes

40

the performance of a different contract. When this happens the Court will hold that the contract has been frustrated.

In the course of the hearing in this case learned counsel for all parties concerned have placed before me certain formal admissions. They are entitled "Formal Admissions" and are in the following terms:

"For the purposes of these proceedings, the parties admit the following matters:—

1. Insofar as the building work was delayed beyond 31/12/76, the delay was attributable to events for which the Defendant accepts the risk under the sale and purchase agreements, but in respect of which the Defendant was not at fault. 10
2. The Po Shan Road landslip of 18th June 1972 was an unforeseeable natural disaster.
3. As a result of the landslip, it was not possible for the Defendant to have completed the said building before 1/10/76 or reasonably practicable for the Defendants to do so before 31/12/76. The Defendant does not contend that such impossibility existed beyond the said 1/10/76.
4. The Defendant did not exercise the right to rescind, if any, under Clause 22 of the sale and purchase agreements within the required time if the Court should hold that there was an obligation on the part of the Defendant, should 20 it wish to exercise the right, to do so forthwith.
5. The building is expected to be completed by January 1978. The superstructure has already been completed and finishing works are in progress. There were no amendments to the general plans and the various apartments in the building are identical with those shown on the original approved plans in terms of area, configuration, number of undivided shares allocated and the other material respects.

Counsel have been instructed to make the above formal admission."

In addition the plaintiffs call two officers of the Building Authority. The defendant's director Wong Tak Fai also gives evidence. It is not necessary to refer 30 to the evidence in detail. Suffice it to say that I find as a fact on their evidence that as a result of the landslip the Building Authority was in no position to approve whatever plan which might render the site safe to build on until mid 1975. So much depended on the soil test and the observation of the ground water levels. With ideas of rendering the site safe for building purposes the defendant had to undertake a great deal more of work than what was originally required such as underpinning the foundation of the lower block and sinking caisson columns to secure the retaining wall and the access road. The defendant's business is that of a property developer who operates on the basis of developing building sites and complete the whole transaction on sales 40 within a matter of four to five years for each project. In this day and age of inflation any prolonged delay invariably result in high costs and expenses for each project. It

is a fact however, that the defendant retained all the deposit and down payment of the plaintiffs who paid for the units in the said buildings up to August/September 1975. I also find as a fact that soon after the landslip the defendant had the opportunity to rescind the contract and refund the deposits and down payments to the plaintiffs without interests by virtue of Clause 22 of the agreements.

I now come to the nature and terms of the agreements. They are all in the same material terms. It is not necessary for me to decide whether they are agreements simply for the sale of land. If it were necessary I am of opinion that they are not. They require something more from the defendant. Having regard to the work to be done within a short period of time before the land become sellable it is idle to suggest that the plaintiffs would be satisfied with each of them being assigned undivided shares in a fraction of the building site without a building part of which each of the plaintiffs could be entitled to have exclusive use. The agreements should be construed on the basis that the principle of frustration is applicable without going into the deep water of the Cricklewood case. As to the terms of the agreements I find that Clause 3 provides for all events set out therein subject to a time limit of their effects. Time is of the essence of the contract under Clause 12 of the agreements. Had these two clauses been all which govern the termination or continuance of the agreements I would have found that the agreements had been frustrated by the landslip — the event. It has been admitted that the landslip was an unforeseeable natural disaster. It is also admitted that as a result of the landslip it was not possible for the defendant to complete the said building before the 1st October 1976. As a result of the landslip the combined effect of Clause 3 and Clause 12 of the agreements is that the defendant is bound to pay interests to the plaintiffs on their deposits and down payments at the rate of 1% per month from the 17th May 1974 to the 1st October 1976. This is quite different from the original terms of the original agreements. Up to this point I would say that none of the parties apply their respective minds to this and on which they were never ad idem. However I have also to consider the terms in Clause 22 which is set out at the earlier part of this judgment. In my opinion this clause provides for circumstances which render performance of the agreements impossible. When these happened the defendant had an opportunity to rescind the agreements forthwith by returning the purchase price already paid. Thus the parties had applied their minds to unforeseen events which might cause an impossibility of performance subject to certain conditions. That being so, even the unforeseen and impossibility have been provided for in the agreements. The parties must abide by the terms of contract for its determination. The words in Clause 22 are clear. When the landslip occurred and the performance of the original agreements rendered impossible the defendant had its chance to rescind them forthwith. In order to rescind the agreements the defendant must at once refund to the plaintiffs all instalments of purchase price already paid to-date. This is so particularly where time is of essence of the contract. In the absence of any provision in Clause 22 for any extension of time during which the defendant could rescind the agreements and refund the purchase price I come to the conclusion that the defendant could validly rescind the agreements only soon after the unforeseen event occurred viz: the landslip or within a reasonable time of its realisation of the impossibility of performance within the stipulated time. No one can suggest that three and a half years' time is reasonable. If there is any doubt as to how the word 'forthwith' should be construed I observe that all the agreements are in standard form drafted by solicitors for the defendant.

Applying the principle obtained, and as I understand them, from the cited authorities I am of opinion that since there are clear provisions for the rescission of the agreements in the event of unforeseen circumstances the principle of frustration does not apply. I repeat the word of Lord Reid in *Davis Contractors Ltd. v. Fareham Urban District Council* when he said:

“The question is whether the contract which they did make is, on its true construction, wide enough to apply to the new situation: if it is not, then it is at an end.

In my view, the proper approach to this case is to take from the arbitrator’s award all facts which throw light on the nature of the contract, or which can properly be held to be extrinsic evidence relevant to assist in its construction and then, as a matter of law, to construe the contract and to determine whether the ultimate situation, as disclosed by the award, is or is not within the scope of the contract so construed.” 10

In the words of Lord Dunedin at page 137 of the *Metropolitan Water Board* case:

“The question is one of contract law, and the decision in each case depends on the ascertainment of the true meaning of the bargain between the parties. If the parties have provided by apt words in the contract for their mutual rights or liabilities, in the event of the contract works being stopped, or indefinitely hindered by the operation of a subsequent law and such provision is not contrary to public policy, then it would be the duty of any Court to give effect to such provision.” 20

In my construction of the agreements the unforeseen and the impossibility have been provided for. The parties must abide by the terms. There is no room for the application of the principle of frustration. If the defendant can rely on that principle then the Court must ignore the provisions in Clause 22 and grant the defendant extra relief without complying with the conditions stipulated in the said Clause 22. That indeed is asking this Court to exercise an absolving power of which the Court has none. For this reason I come to the conclusion that none of the agreements has been frustrated. The parties must be left to their remedies in accordance with the terms of the agreements. Having failed to act on the terms of the agreement it is too late for the defendant to avoid liability of the full terms of the agreements. 30

There remains the only question whether I may properly order specific performance. In the course of the hearing the defendant further admits that:

- “1. Defendant at all material times the registered owner of the suit property.
2. The apartments subject matter of action, had not been sold to others.
3. The contractor for the job is at all times an associate company of defendant and under control of defendant.”

Supreme
Court of
Hong Kong
No. 5
Judgment of
the
Honourable
Mr. Justice
Li
3rd Dec.
1977
(Contd.)

It is true that the Court will not order specific performance of a contract which requires the supervision of the Court — particularly in respect of personal performance. It is also true according to the evidence of the plaintiffs' witness Wilkinson that the grades of finishing vary considerably from building to building. In view of the admissions, however, I am satisfied that the finish of the various flats would not be of a lower standard than that as advertised in the first instance when the agreements were signed. They are all to be built by the same contractor which is a wholly owned subsidiary of the defendant. As such the performance would not require supervision of the Court. In Document 243, the defendant has advertised no less than over 100 flats other than those committed to the plaintiffs. I cannot imagine that the defendant would build flats of a different finish in the same block or to lower the standard of other flats in order to spite the plaintiffs. I also bear in mind that the agreements, though partly building contracts in nature, are also agreements of sales of land. For these reasons I am of opinion that specific performance is a proper order. The question of interests payable on the purchase price paid in advance may be assessed by the Registrar. I direct that they be so assessed.

10

In passing I like to observe that, from the moral point of view, it is as unjust that the defendant should have to deliver the units of flats to the plaintiffs plus interests for the down payments for all these years — bearing in mind the extra expenses the defendant has to incur through no fault of its own — as it is for the defendant to be completely absolved from the agreements after hanging on to the moneys all these years and had the use of them. However, the parties insisted on litigation. Hardship does not come into the picture in such cases as these. I have to adjudicate according to the facts and law.

20

In conclusion I find for the plaintiffs in Action 2738 of 1975 in respect of paragraphs (a), (b) and (c) of their prayer in the Statement of Claim. I find also for the plaintiffs in Action No. 2739 of 1975 in respect of paragraphs (a), (b), (d) and (e) of their prayer in the Statement of Claim. The counterclaim of the defendant in both actions be dismissed.

(Simon F.S. Li)
judge

30

Supreme
Court of
Hong Kong

IN THE SUPREME COURT OF HONG KONG
HIGH COURT

No. 6
Order of the
Honourable
Mr. Justice
Li
3rd Dec.
1977

ACTION NO. 2739 OF 1975

BETWEEN

WONG LAI YING	1st Plaintiff	
MAN CHIU TONG	2nd Plaintiff	
CHUNG YUK WA, AGNES	3rd Plaintiff	
LEUNG SHING KWAN, CHARLES		
and		
LAM SHUK HAN, MARGARET	4th Plaintiffs	10
WONG MAN TAK and LUI LAI YING	5th Plaintiffs	
KWOK ON PONG	6th Plaintiff	
TAM KWOK CHEUNG, NG TACK MAY		
and		
NG TACK MAY, Personal Representative of NG MAY LAN deceased	7th Plaintiffs	
CHAN KAI SHIU and LAI KWOK MEI, AMY	8th Plaintiffs	
TSENG HING YU	9th Plaintiff	
CHENG SI YIC and		20
CHEUNG LAI SUN, JULIANA	10th Plaintiffs	
LO KAM TO	11th Plaintiff	
LO KAI FAI	12th Plaintiff	
YIM YAN	13th Plaintiff	
CHAN KWAN SHEUNG	14th Plaintiff	
AU YEUNG CHUNG OI, BETTY	15th Plaintiff	
LAM TSANG SUK YEE	16th Plaintiff	
CHENG CHI CHION	17th Plaintiff	
LI YU TUNG	18th Plaintiff	
TSANG SUK YEE	19th Plaintiff	30
LOCK CHEUNG HELEN	20th Plaintiff	
TO SAI MUI	21st Plaintiff	
TSANG YUK KING	22nd Plaintiff	
LOKE YIP NGOI YAN	23rd Plaintiff	
NG HOI MING	24th Plaintiff	
and		
CHINACHEM INVESTMENT CO. LTD.	Defendant	

Before the Honourable Mr. Justice Li in Court.

JUDGMENT

Dated and entered the 3rd day of December 1977.

40

This action having come before the Honourable Mr. Justice Li without a jury, at the High Court of Justice, Hong Kong and the said Mr. Justice Li having on 3rd day of December 1977 ordered that judgment as hereinafter provided be entered for the Plaintiff and directed that execution be stayed pending appeal to the Court of

Appeal on the undertaking given by the leading Counsel for the Defendant to prosecute such appeal with due diligence.

It is this day adjudged that:—

- (1) Judgment for the Plaintiffs for a declaration that the agreements between the Plaintiffs and the Defendant have not been frustrated.
- (2) Judgment for the Plaintiffs for a declaration that the Plaintiffs were at all material times and are entitled under the said agreements to wait for completion and to be paid interest at the rate of 1% per calendar month on all amounts paid under the said agreements from the expiry date for completion of the building subject to such extension as permitted under the said agreements until the date of completion of the said building. 10
- (3) Judgment for the Plaintiffs for a declaration that the Plaintiffs are entitled to be paid interest at the end of every calendar month computed at the rate aforesaid until the completion of the building.
- (4) Judgment for the Plaintiffs for a decree of specific performance of the said agreements.
- (5) The counterclaim of the Defendant be dismissed.
- (6) Costs to the Plaintiffs on the claim and counterclaim.

(Sd.) S.H. Mayo (L.S.)
Acting Registrar

IN THE COURT OF APPEAL
CIVIL APPEAL NO. 5 OF 1978
(ON APPEAL FROM HIGH COURT ACTION NO. 2739 OF 1975)

In the Court
of Appeal
High Court
Hong Kong

IN THE COURT OF APPEAL
CIVIL APPEAL NO. 5 OF 1978
(ON APPEAL FROM HIGH COURT ACTION NO. 2739 OF 1975)

No. 1
Notice of
Appeal
12th Jan.
1978

BETWEEN

CHINACHEM INVESTMENT CO. LTD.

Appellant
(Defendant)

and

WONG LAI YING
MAN CHIU TONG
CHUNG YUK WA, AGNES
LEUNG SHING KWAN, CHARLES and
LAM SHUK HAN, MARGARET
WONG MAN TAK and LUI LAI YING
KWOK ON PONG
TAM KWOK CHEUNG, NG TACK MAY
and NG TACK MAY, Personal
Representative of NG MAY LAN deceased
CHAN KAI SHIU and
LAI KWOK MEI, AMY
TSENG HING YU
CHENG SI YIC and
CHEUNG LAI SUN, JULIANA
LO KAM TO
LO KAI FAI
YIM YAN
CHAN KWAN SHEUNG
AU YEUNG CHUNG OI, BETTY
LAM TSANG SUK YEE
CHENG CHI CHION
LI YU TUNG
TSANG SUK YEE
LOCK CHEUNG HELEN
TO SAI MUI
TSANG YUK KING
LOKE YIP NGOI YAN
NG HOI MING

Respondents
(1st Plaintiff)
(2nd Plaintiff)
(3rd Plaintiff)

10

(4th Plaintiffs)
(5th Plaintiffs)
(6th Plaintiff)

(7th Plaintiffs)

(8th Plaintiffs)
(9th Plaintiff)

20

(10th Plaintiffs)
(11th Plaintiff)
(12th Plaintiff)
(13th Plaintiff)

(14th Plaintiff)
(15th Plaintiff)
(16th Plaintiff)

(17th Plaintiff)
(18th Plaintiff)
(19th Plaintiff)

30

(20th Plaintiff)
(21st Plaintiff)
(22nd Plaintiff)

(23rd Plaintiff)
(24th Plaintiff)

NOTICE OF APPEAL

TAKE NOTICE that the Court of Appeal will be moved so soon as Counsel can be heard on behalf of the abovenamed Appellant (Defendant) Chinachem Investment Co. Ltd. on Appeal from the judgment and Order of the Honourable Mr. Justice Li dated the 3rd day of December 1977 whereby the judgment given for the Respondents (Plaintiffs) with costs and the dismissal of the Appellant's (Defendant's) counterclaim may be reversed and that an Order be made that judgment be entered for the Appellant (Defendant) with costs and that the Appellant (Defendant) be granted a Declaration that the divers agreements entered into between the Appellant (Defendant) and the Respondents (Plaintiffs) in respect of the sale and purchase of various

equal undivided parts of and in Inland Lot No. 8171 and of and in the building which is in the course of being erected thereon known as "University Heights" have been frustrated and that the Respondents (Plaintiffs) do pay to the Appellant (Defendant) the costs of this appeal to be taxed.

AND FURTHER TAKE NOTICE that the grounds of this Appeal are as follows:

1. The learned trial Judge erred in law and on the facts in deciding that the contracts in suit were not frustrated by the Po Shan Road landslip. The Respondents (Plaintiffs) expressly admitted at the hearing that the said landslip was an unforeseeable natural disaster and that as a result thereof it was not possible for the Appellant (Defendant) to have completed the building 'University Heights' before 1st October 1976 and that the Appellant (Defendant) was not at fault in so far as completion has been delayed for a greater period. Unless the contracts in suit were frustrated, the Appellant (Defendant) was obliged to complete the building by May, 1974 at the latest, time being of the essence. 10
2. The learned trial Judge erred in construing clause 22 of each of the contracts in suit as legislating for the events which occurred (namely the Po Shan Road landslip and its consequences as found by the learned trial Judge) because:—

- (a) The event which occurred was not one 'whereby the vendor became unable to sell the said undivided shares': indeed by his order the learned trial Judge has ordered the Appellant (Defendant) to sell the same. 20

Alternatively

- (b) If the event which occurred was one 'whereby the vendor became unable to sell the said undivided shares', it was nevertheless not an event within the contemplation of the parties, because it created a situation in which it was completely uncertain for a period of at least three years in which it was completely uncertain whether, and if so, when, and in what circumstances, the Appellant (Defendant) would be able to sell the same in accordance with the said contracts. The learned trial Judge found as a fact on the evidence before him that the Building Authority was in no position to approve whatever plans the Appellant (Defendant) might submit until the middle of 1975. 30
- (c) The event contemplated by clause 22 of each of the said contracts were events which the Appellant (Defendant) would know to create the impossibility of performance of the contract, since the clause required the Appellant (Defendant) to give notice forthwith upon the occurrence of the event.
- (d) In the events which happened it was impossible for the Appellant (Defendant) to know either upon the occurrence of the landslip, or on the lapse of the building consent that it would be unable to sell the said undivided shares in accordance with the said contracts. 40

(e) The Respondents' (Plaintiffs') contention below was that they were entitled under clause 3(3) of each of the contracts to extend time for completion of the building indefinitely: if that be right, the Appellant (Defendant) could never know that it would be unable to sell the said undivided shares.

3. The learned trial Judge erred in construing clause 22 aforesaid as entitling the Appellant (Defendant) to give notice thereunder within a reasonable time after realising its position. The Appellant's (Defendant's) rights under the said clause depend upon the occurrence of the stated event irrespective of the Appellant's (Defendant's) knowledge or belief.

10

4. The said clause 22 merely gave the Appellant (Defendant) an option to rescind each of the contracts. The said option was never exercised, and in these circumstances the clause ought not to be construed as depriving either party to each contract of the right (deriving under the general law) to be relieved from the contract on the occurrence of an unforeseeable event (such as the landslip) defeating their adventure.

5. The learned trial Judge found that it was unjust that the Appellant (Defendant) should be compelled to perform the said contracts and ought therefore to have refused to make an order for specific performance thereof. In so far as the learned trial Judge thought it unjust that the Appellant (Defendant) has benefited from the retention of the Respondents' (Plaintiffs') deposits, he failed to take into account the Respondents (Plaintiffs) right to interest thereon at common law and under the Law Amendment and Reform (Consolidation) Ordinance (Cap. 23).

20

6. The learned trial Judge erred in law in awarding specific performance. The work remaining to be done is not specified by the contracts or otherwise in sufficient detail to enable the Appellant (Defendant), the Respondents (Plaintiffs) or the Court itself to determine what work requires to be done pursuant to the specific performance decree. Furthermore, the carrying out of the work would require the supervision of the Court.

7. The learned trial Judge's order as to costs was wrong. The Appellant (Defendant) succeeded on all factual issues and ought to have been allowed the costs thereof.

30

Dated the 12th day of January 1978.

(Sd.) F. Zimmern & Co.
Solicitors for the Appellant.

To: Messrs. Hwang & Co.,
Solicitors for the Respondents (Plaintiffs).

In the Court
of Appeal
High Court
Hong Kong

IN THE COURT OF APPEAL
CIVIL APPEAL NO. 5 OF 1978
(ON APPEAL FROM HIGH COURT ACTION NO. 2739 OF 1975)

No. 2
Respondent's
Notice
1st Feb.
1978

BETWEEN

CHINACHEM INVESTMENT CO. LTD.

Appellant
(Defendant)

and

WONG LAI YING
MAN CHIU TONG
CHUNG YUK WA, AGNES
LEUNG SHING KWAN, CHARLES and
LAM SHUK HAN, MARGARET
WONG MAN TAK and LUI LAI YING
KWOK ON PONG
TAM KWOK CHEUNG, NG TACK MAY
and NG TACK MAY, Personal
Representative of NG MAY LAN deceased
CHAN KAI SHIU and
LAI KWOK MEI, AMY
TSENG HING YU
CHENG SI YIC and
CHEUNG LAI SUN, JULIANA
LO KAM TO
LO KAI FAI
YIM YAN
CHAN KWAN SHEUNG
AU YEUNG CHUNG OI, BETTY
LAM TSANG SUK YEE
CHENG CHI CHION
LI YU TUNG
TSANG SUK YEE
LOCK CHEUNG HELEN
TO SAI MUI
TSANG YUK KING
LOKE YIP NGOI YAN
NG HOI MING

Respondents
(1st Plaintiff)
(2nd Plaintiff)
(3rd Plaintiff)
(4th Plaintiffs)
(5th Plaintiffs)
(6th Plaintiff)

10

(7th Plaintiffs)

(8th Plaintiffs)
(9th Plaintiff)

20

(10th Plaintiffs)

(11th Plaintiff)

(12th Plaintiff)

(13th Plaintiff)

(14th Plaintiff)

(15th Plaintiff)

(16th Plaintiff)

(17th Plaintiff)

(18th Plaintiff)

(19th Plaintiff)

(20th Plaintiff)

(21st Plaintiff)

(22nd Plaintiff)

(23rd Plaintiff)

(24th Plaintiff)

30

RESPONDENTS NOTICE

No. 2
Respondent's
Notice
1st Feb.
1978
(Contd.)

TAKE NOTICE that the Respondents intend upon the hearing of the appeal under the Defendant's Notice of Appeal dated 12th January 1978 from the judgment and order of the Honourable Mr. Justice Li dated 3rd December 1977 to contend that the said judgment or orders should be affirmed on the following grounds other than or additional to those relied on by the Court below:—

1. The bargain between the parties, in each case, was one for the sale and purchase of an interest in land and in a building to be erected thereon and such a bargain, on its true construction, was not in law capable of being frustrated by the event or events relied upon or at all or alternatively not capable of being frustrated by any event short of complete destruction or loss of identity of the land on which the building was to be constructed and/or which would render it impossible for the Defendants to convey any interest in the property agreed to be sold. Further and/or alternatively: 10

2. Under the express provisions of the sale and purchase agreements, force majeure, Acts of God and/or circumstances beyond the control of the Defendants entitled the Defendants merely to an extension of time (not exceeding in the aggregate 365 days from the expiry of the 18 months for completion of the building provided for under the agreements). The Respondents contend that unforeseen disasters natural or otherwise have therefore been expressly legislated for in the contracts; the Respondents further contend that the risks attendant upon such events have also been assumed by the Defendants, in particular the risks that they would not by reason of such events be able to complete the building by the maximum time allowed under the said contracts, such time being limited essentially for the protection of the Respondents' interest. So long as the maximum time allowed had not been exceeded the Respondents would not be entitled to rescind the contracts or claim interest in respect of monies paid. The contracts, however, went on to provide expressly that should the said building be not completed within the maximum time allowed the Respondents had the right either to rescind the contracts and recover their monies with interest or wait for completion and be paid interest in the meantime. By such provisions the parties had expressly legislated for the very eventuality that happened. The Respondents contend that this would be the effect of the aforesaid provisions irrespective of whether there was or was not a clause such as Clause 22 of the contracts giving a right to the Defendants in certain limited circumstances to rescind the contracts (reliance on which Clause was formally abandoned by the Defendants at the trial). 20 30

AND FURTHER TAKE NOTICE the Respondents will apply to the Court of Appeal for an Order that the Defendant pays to the aforesaid Respondents the costs occasioned by this notice.

Dated the 1st day of February 1978.

(Sd.) Hwang & Co.
Solicitors for the Respondents.

40

In the Court
of Appeal
High Court
Hong Kong

IN THE COURT OF APPEAL

1978 No. 4
(Civil)

No. 3
Judgment of
the
Honourable
Mr. Briggs,
Chief
Justice
4th Aug.
1978

BETWEEN:

CHINACHEM INVESTMENT CO. LTD.
and
CHEUNG KUNG-LEUNG
FOU YOU-SING

Appellant

Respondents

IN THE COURT OF APPEAL

1978 No. 5
(Civil)

CHINACHEM INVESTMENT CO. LTD.
and
WONG LAI-YING AND OTHERS

Appellant

10

Respondents

Coram: Briggs, C.J.,
Huggins & Pickering, JJ.A.

Date: 4 August, 1978.

JUDGMENT

The appellant in each of the two appeals is the developer and owner of a building known as University Heights situated at 12 Babington Path, Hong Kong. In Civil Appeal No. 4 of 1978 there are two respondents and in Civil Appeal No. 5 of 1978 there are 24 respondents. Each respondent is a purchaser of one or more flats in the said building. 20

On December 3rd, 1977 judgment was entered in favour of the respondents for a declaration that the agreements of purchase and sale of the flats made between the individual respondents and the appellant had not been frustrated. Various other orders were made and, in particular, the court ordered specific performance of the contracts of sale which are the subject matter of Civil Appeal No. 5 of 1978.

The respondents contend that the contracts in both appeals have been frustrated. And, of course, if they are right the orders for specific performance cannot stand.

The contracts of sale are all in similar terms so far as the material provisions are concerned. They were all entered into on different dates in 1970 and 1971. The two respondents in Civil Appeal No. 4 of 1978 have paid the whole contract price. The respondents in Civil Appeal No. 5 of 1978 have each paid a down payment or a deposit to the appellant. All the sums paid by the respondents in both appeals have been paid into court. 30

The building was to consist of two tower blocks and the appellant obtained the consent of the Building Authority to commence work on November 17th, 1971. At the time of the signing of the contracts the building was in its early stages. By June 1972 the foundation of one block had been completed and the foundation of the second

In the Court of Appeal
High Court
Hong Kong

No. 3
Judgment of the
Honourable
Mr. Briggs,
Chief
Justice
4th Aug.
1978
(Contd.)

block had been half completed.

On June 18th, 1972 part of the hillside above the site of University Heights slipped down the hill taking with it a block of flats of thirteen storeys called Kotewall Court. The debris from this building together with many hundreds of tons of earth landed on the appellant's site obliterating the building works already completed. The landslide was of major proportions and 67 persons were killed.

The authorities realised that the whole area was unsafe and the appellants were barred from the site while urgent rescue work was undertaken. At this stage, the appellants did not know if they would ever be allowed to return to the site.

On November 3rd, 1972, the Building Authority informed the appellants that building on the site would be possible but that certain very stringent conditions would be imposed before a permit to build was issued. 10

They pointed out that the whole project of the appellants must be looked at afresh. The disaster had caused Government to revise the policy for buildings in the Mid-levels and their requirements for safety would be very much more onerous in the future.

A very thorough investigation of the site would be necessary and no consent to continue to build would be granted until details of the work to be done to stabilize the site had been submitted and considered by the Authority.

The Building Authority pointed out to the appellants that the consent to commence building previously given had lapsed by operation of section 20 of the Buildings Ordinance. It would, therefore, have been illegal for the appellants to have continued to complete the building. However, they were allowed to enter the site and do clearance and demolition work. 20

Clearance of the site was then commenced and a thorough investigation was undertaken so as to comply with the new requirements of Government.

The site was an awkward one and it was not cleared until May 25th, 1973. Extensive soil tests were made commencing in August 1973. These lasted for a whole year so that differing weather conditions according to the seasons could be studied. 30

As a result of the investigation, it was decided that the present foundations of the building or part of them were insufficiently strong. And permission was granted to the appellants to undertake remedial work in the summer of 1975. Finally, the renewed consent to resume the building work was granted in November 1976.

As I have said the original consent had been given in November 1971. The building was scheduled under the contract to take eighteen months to build but a clause in the contracts (to which I shall refer later in this judgment) allowed an extension of 365 days. So the consent to resume work was given a very long time after the latest possible date for completion under the contracts.

In the Court
of Appeal
High Court
Hong Kong

At the trial it was conceded that due to the landslide and the date of the renewal of the consent it was not possible for the appellant to complete the building before October 1st, 1976 or reasonably practicable for them to do so before the end of 1976.

No. 3
Judgment of
the
Honourable
Mr. Briggs,
Chief
Justice
4th Aug.
1978
(Contd.)

It was also conceded at the trial that the landslide was "an unforeseeable natural disaster". To summarise the case of the appellants, they say that as a result of that disaster they were first excluded from the site totally for five months. Secondly, the building permit lapsed making it illegal for them to continue with the work. They had to stop. Thirdly, they say that there was a long and uncertain period of delay. This was due to investigatory work necessitated by the new requirements of Government and it cannot be considered to be a limited period of delay. It was a period which at the time was incalculable. And, in fact, it lasted for 3½ years. Part of this period was due to the fact that certain remediable works on the site had to be done, a lengthy investigation as to the feasibility to build had to be undertaken and the design of the building had to be refashioned — none of this was envisaged by the original contract. Fourthly, they had already spent some two million dollars on the foundation of the building. Almost all, if not all of this was lost as different foundations were required to be constructed. It appears that though the superstructure of the building is much the same as the original design this is not true of the foundations, which were wholly different from what was considered appropriate before the landslide occurred and at the time of the signing of the contract. And they were very much more expensive. Underpinning work was necessary. And the spread-footing foundations in one of the two blocks of flats had to be replaced by caissons. In addition, it was necessary to provide caissons to support Kotewall Road, the road running alongside the site. The trial judge found as a fact that the appellants had to undertake a great deal more work than was originally considered sufficient. In view of all this, the appellants say, that not only was there delay but they were put in a position of uncertainty: they did not know when they would be allowed to continue building, nor what type of building they would be allowed to build: they could not tell whether any flats built on that site would be saleable, even if they were allowed to build. They were completely in the dark as to the cost of any building and the length of time it would take to complete. All this, they say, flows from the unforeseeable natural disaster of the landslide.

10

20

30

The contracts of purchase and sale were in the form that the vendor, the appellants, were to build a block of flats on their own land and when it was complete to sell a flat or flats in that building to the purchaser. This is a very common form of contract in Hong Kong. The agreements (and I am now referring to the agreements, the subject matter of Civil Appeal No. 5) contained provision for payment by instalments. Upon the signing of the agreement a deposit was to be paid to the appellants: further instalments (called 'deposits') were to be paid at regular intervals which were made dependent upon the stage at which the building had reached. The final balance of the purchase price was to be paid to the vendor, the appellants, "within seven days upon the purchaser being notified by the vendor in writing that the occupation permit in respect of the said building has been issued by the Building Authority."

40

Though the contracts were signed long before the building was to be completed the date of the conveyance was to be in accordance with the above words which are taken from the Schedule to the contracts. These contracts were essentially contracts for the purchase of a flat which was to be built by the appellants on their own land. They were executory contracts, to grant a lease, contingent upon the appellants

In the Court of Appeal
High Court
Hong Kong

building the block of flats and obtaining a building permit and, subsequently, an occupation permit. The actual conveyance could be described as a formality, though, of course, a necessary formality.

No. 3
Judgment of
the
Honourable
Mr. Briggs,
Chief
Justice
4th Aug.
1978
(Contd.)

Other terms of the contract which it is necessary to consider are the following:—

“Clause 3(1) The Vendor shall comply with the requirement of the Building Authority and of the Director of Public Works relating to the said building and shall complete the building within the period of eighteen months from the date of the issue by the Building Authority of a permit of commencement of building works.

(2) If the Vendor shall fail to complete the said building within the period as aforesaid or such further period as may be allowed under sub-paragraph (4) hereof, the Purchaser shall be entitled on giving to the Vendor not less than 14 days notice in writing in that behalf to rescind this Agreement and on the expiry of such notice this Agreement shall be rescinded and the Vendor shall repay to the Purchaser all amounts paid by the Purchaser hereunder together with interest thereon at the rate of one per cent per calendar month from the date or dates on which such amounts were paid to the date of repayment the payment of such amount and interest to be in full and final settlement of all claims by the Purchaser against the Vendor hereunder. 10 20

(3) If the Vendor shall fail to complete the said building within the said period of eighteen months as aforesaid (subject to such extension as may be granted by the Architect under sub-paragraph (4) hereof) the Purchaser shall have the option notwithstanding any extension of time or further period granted as aforesaid either to rescind this Agreement in which event the above-mentioned provisions for rescission shall apply or to wait for the completion of the building in which event the Vendor shall pay to the Purchaser interest at the rate of one per cent per calendar month on all amounts paid hereunder from the expiry date of completion of the building (subject to such extension as aforesaid) until the date of the completion of the said building. 30

(4) The Architect shall grant such extension of time for the completion of the said building beyond the said eighteen months as aforesaid (not exceeding in any event 365 days in the aggregate) as shall appear to the Architect to be reasonable having regard to delay caused by any of the following, that is to say:— 40

- (a) Strike or lockout of workmen,
- (b) Bad weather,
- (c) Riots or civil commotion,
- (d) Force Majeure or Act of God,
- (e) Delay in completing the foundations due to water rock or similar obstruction or difficulty,
- (f) Delay in connecting drainage or water pipes in dealing with the application for permit of commencement of building works or

In the Court
of Appeal
High Court
Hong Kong

No. 3
Judgment of
the
Honourable
Mr. Briggs,
Chief
Justice
4th Aug.
1978
(Contd.)

- occupation permit or attributable to the Public Works Department or any other Department or Authority concerned,
- (g) Default of contractors or subcontractors,
 - (h) Act of the Queen's enemies and
 - (i) Any other cause beyond the control of the Vendor.

12. Time shall in every respect be of the essence of this contract.

22. It is further agreed that notwithstanding anything herein contained should any dispute arise between the parties touching or concerning this Agreement or should any unforeseen circumstances beyond the Vendor's control arise whereby the Vendor becomes unable to sell the said undivided shares and Apartment to the Purchaser as hereinbefore provided, the Vendor shall be at liberty to rescind this Agreement forthwith and to refund to the Purchaser all instalments of purchase price paid by the Purchaser hereunder without interest or compensation and upon such rescission and upon repayment of the instalments of purchase price this Agreement shall become null and void as if the same had not been entered into and neither party hereto shall have any claim against the other in respect thereof."

10

Following the landslide the appellants did not attempt to exercise their right to rescind the agreements under clause 22.

20

In August 1975, before the consent of the Building Authority to resume construction had been given, the respondents in Appeal No. 5 made enquiries as to the operation of clause 3(3) of the agreement which is quoted above; and the respondents in Civil Appeal No. 4 likewise enquired about interest payable under clause 3(2) also quoted above. The appellants replied that they considered that all the contracts had been discharged by reason of frustration and the amount of money which had been paid to the appellants was returned to each individual respondent.

The respondents in Civil Appeal No. 4 accepted the return of their money but claimed and still claim interest under clause 3(2) of the contract. The respondents in Civil Appeal No. 5 refused to accept the moneys. So the appellants paid these sums into court. These appellants also claim interest on such sums under the provisions of clause 3(3) of the contract.

30

Frustration is a doctrine of the common law. It arises where it appears from the nature of the contract and from the surrounding circumstances that the parties have contracted on the basis that a certain state of things shall continue, but through no fault of either party, an event occurs which makes performance of the contract impossible or only possible in a very different manner from what was contemplated when the contract was entered into. In the present case, the event which the appellants say frustrated the contract was the landslide. And this was found by the trial judge to be "a frustrating event".

40

It is necessary for the court to look at the matter at the time of the occurrence of the frustrating event and not with hindsight or long afterwards. It must pay regard to the probabilities as known to the parties at the time that the landslide occurred.

In the Court
of Appeal
High Court
Hong Kong

The question is: What was the position at that time? Though, of course, the subsequent history of events may be of assistance in determining the matter.

No. 3
Judgment of
the
Honourable
Mr. Briggs,
Chief
Justice
4th Aug.
1978
(Contd.)

In the case of *Bank Line, Limited v. Arthur Capel and Company*,¹ Lord Sumner said (at page 454):—

“The question must be considered at the trial as it had to be considered by the parties, when they came to know of the cause and the probabilities of the delay and had to decide what to do.”

Lord Sumner in *Hirji Mulji v. Cheong Yue Steamship Company Limited*,² a Privy Council case, said at Page 509:—

“What the parties say and do is only evidence, and not necessarily weighty evidence, of the view to be taken of the event by informed and experienced minds.” 10

This statement of the law was adopted by Lord Wright in *Denny, Mott & Dickson Ltd. v. James B. Fraser & Co. Ltd.*³ at page 276 where he has this to say:—

“.....when frustration occurs, it is automatic, and that its legal effect depends not on the intention of the parties or even on their knowledge as to the event, but on its occurrence in such circumstances as to show it to be inconsistent with the further prosecution of the adventure. I mention these two aspects of the principle here because they are important for the decision of the present case. The event is something which happens in the world of fact, and has to be found as a fact by the judge. Its effect on the contract depends on the meaning of the contract, which is matter of law. Whether there is frustration or not in any case depends on the view taken of the event and of its relation to the express contract by ‘informed and experienced minds.’” 20

In the present case the parties obviously contracted on the basis that the land on which the blocks of flats were to be erected would remain continually available. And that a building permit would remain in force so that it would not be illegal to build. These points are obvious from the terms of the contract itself.

Clause 12 of the contracts makes time of the essence of the contract “in every respect” and the parties expected to be able to complete the purchase in a reasonable time, at most within 2½ years, from the issue of the building permit and did not contemplate the very long period of delay which has occurred. 30

At the time of the landslide the parties could not know how soon the appellants would be allowed to re-enter the site, how long the delay would be and whether they would be granted a new building permit, nor if one was granted, when it would be approved. The position of the parties was clouded in uncertainty. There are also

- (1) (1919) A.C. 435
- (2) (1926) A.C. 497
- (3) (1944) A.C. 265.

In the Court of Appeal High Court Hong Kong two other points which must be taken into account. By reason of the landslide the appellant has been put to enormous extra expense and the monies of the respondents which were in the appellant's hands were tied up on an idle site.

No. 3
Judgment of
the
Honourable
Mr. Briggs,
Chief
Justice
4th Aug.
1978
(Contd.)

The trial judge held that the landslide was a frustrating event and I see no reason to disagree with that finding.

The trial judge, though he made this finding, held that the doctrine of frustration did not apply in view of the provisions of clause 22 of the contract which I have quoted above. In his own words:—

“I am of the opinion that since there are clear provisions for the rescission of agreements in the event of unforeseen circumstances the principle of frustration does not apply.” 10

Counsel for the appellants argued that the true rule is that where there is a frustrating event, the contract automatically comes to an end by operation of law “unless it is quite plain” from the contract that the parties have agreed to be bound by the new circumstances. The question to be answered is: Have the parties excluded the common law doctrine of frustration by the terms of their contract? Lord Haldane, in the *Bank Line Case*,¹ stated the principle thus:—

“What is clear is that where people enter into a contract which is dependent for the possibility of its performance on the continued availability of the subject-matter, and that availability comes to an unforeseen end by reason of circumstances over which its owner had no control, the owner is not bound unless it is quite plain that he has contracted to be so.” 20

If the parties have specifically contracted to be bound by the new circumstances there will be no room for the doctrine of frustration to apply. However, the intention to be so bound must be clearly expressed.

As I have said, in reaching his conclusion that the doctrine of frustration does not apply in this case, the trial judge relied on the terms of clause 22 of the contract. This gives an option to the vendor to rescind the contracts and to return the purchase money already paid. In the words of the clause this option arises when “any unforeseen circumstances beyond the vendor's control whereby the vendor becomes unable to sell” (the flats) occur. And it was common ground that the landslide was “an unforeseeable natural disaster”. The question is whether the words of clause 22 of the contracts clearly and plainly show that the parties contracted to exclude the doctrine of frustration. Counsel for the appellants argued that they did not. 30

The appellants rely also on a passage in the judgment of Lord Denning in “*The Eugenia*”,⁴ at page 239:—

“It has frequently been said that the doctrine of frustration only applies when the new situation is ‘unforeseen’ or ‘unexpected’ or ‘uncontemplated’, as if that

(1) (1919) A.C. 435.

(4) (1964) 2 Q.B. 227.

In the Court
of Appeal
High Court
Hong Kong

No. 3
Judgment of
the
Honourable
Mr. Briggs,
Chief
Justice
4th Aug.
1978
(Contd.)

were an essential feature. But it is not so. The only thing that is essential is that the parties should have made no provision for it in their contract. The only relevance of it being 'unforeseen' is this: If the parties did not foresee anything of the kind happening, you can readily infer they have made no provision for it: whereas, if they did foresee it, you would expect them to make provision for it. But cases have occurred where the parties have foreseen the danger ahead, and yet made no provision for it in the contract. Such was the case in the Spanish Civil War when a ship was let on charter to the republican government. The purpose was to evacuate refugees. The parties foresaw that she might be seized by the nationalists. But they made no provision for it in their contract. Yet, when she was seized, the contract was frustrated, see *W.J. Tatem Ltd. v. Gamboa* (1939 1 K.B. 132). So here the parties foresaw that the canal might become impassable: it was the very thing they feared. But they made no provision for it." 10

"To see if the doctrine applies, you have first to construe the contract and see whether the parties have themselves provided for the situation that has arisen. If they have provided for it, the contract must govern. There is no frustration. If they have not provided for it, then you have to compare the new situation with the situation for which they did provide. Then you must see how different it is. The fact that it has become more onerous or more expensive for one party than he thought is not sufficient to bring about a frustration. It must be more than merely more onerous or more expensive. It must be positively unjust to hold the parties bound. It is often difficult to draw the line. But it must be done. And it is for the courts to do it as a matter of law." 20

In *Metropolitan Water Board v. Dick, Kerr and Company, Limited*⁵ a firm of contractors contracted with a water board to construct a reservoir. The work was to take six years. The year was 1914. The contract contained a proviso that if "by reason of any difficulties, impediments, obstructions, oppositions, doubts, disputes or differences whatsoever and howsoever occasioned" the contractors should, in the opinion of the engineer, have been unduly delayed or impeded in the completion of the contract, the engineer could grant an extension of time for completion. In 1916, as a war time measure the Ministry of Munitions ordered the work on the reservoir to cease. The contractors claimed that the contract had been frustrated by the order of the Minister and it was so held by the House of Lords. 30

In commenting on the effect of the very wide words of the proviso, Lord Dunedin said (at p. 130):—

(These words) ".....only deal, in my view, with more or less temporary difficulties, and do not cover a set of occurrences which would make the contract when resumed a really different contract from the contract when broken off." 40

It cannot be said that the words of clause 22 of the contracts in the present case are any the less wide than the words of the proviso in the *Metropolitan Water Board Case*.⁵

(5) (1918) A.C. 119.

In the Court
of Appeal
High Court
Hong Kong

No. 3
Judgment of
the
Honourable
Mr. Briggs,
Chief
Justice
4th Aug.
1978
(Contd.)

But I think there is a more important point, clause 22 gives an option to the appellants to cancel the contract. It has no application to the respondents. I do not see how this clause affects the application of the doctrine of frustration which operates as a benefit to or to the detriment of both parties.

The fact that there are provisions in a contract giving one party the option to terminate his obligations under the contract in certain circumstances does not in itself exclude the applicability of the doctrine of frustration.

This was the ratio decidendi of the *Bank Line Case*.¹ In that case there was a charterparty in which there were special provisions allowing the charterers to cancel the charter upon the vessel being commandeered by the Government during the period of the charter. The ship was requisitioned. It was held that the special clauses did not exclude the application of the principle of frustration and that the requisition had resulted in the frustration of the charterparty. 10

It does not matter which party is given the right to cancel of course. In order to exclude the doctrine of frustration that intention must be apparent in the contract itself. It must be shown that that was the parties' intention.

In the present contract, I can find nothing which shows that intention. Certainly clause 22 does not express such an intention. It merely gives an option to the appellant, as I have already said, to avoid their contractual obligations, though admittedly in very wide circumstances. 20

The respondents argued that this was not a case for the application of the doctrine of frustration. They relied on *Davis Contractors Ltd. v. Fareham U.D.C.*⁶ This case arose out of a building contract. The contractors agreed to build 78 houses for the Council for a fixed sum in a fixed time. There was a proviso that the contract was subject to there being adequate supplies of labour. Through no fault of the parties there was not an adequate supply of labour and the work took 22 months and cost very much more than the price contracted for. The court held:—

“That the contract had not been frustrated. The fact that, without the fault of either party, there had been an unexpected turn of events, which rendered the contract more onerous than had been contemplated, was not a ground for relieving the contractors of the obligation which they had undertaken and allowing them to recover on the basis of a quantum meruit.” 30

In my view, this case is easily distinguishable from the present case on its facts. All that happened in that case was that the contractors miscalculated and the result was that there was delay and the work was more expensive. Both the elements are present in the present case it is true, but in the *Davis Contractors Case*⁶ there was no element of unforeseeability, illegality or uncertainty. And the contract the contractors actually had to undertake under the contract was the very contract they performed.

It follows that, in my view, the trial judge was wrong. I do not think that clause

(1) (1919) A.C. 435.

(6) (1956) A.C. 696.

In the Court of Appeal
High Court
Hong Kong

22 of the contracts operates so as to exclude the doctrine of frustration. In my view, on the facts of this case, which I have set out earlier in this judgment, these contracts were frustrated by the landslide.

No. 3
Judgment of
the
Honourable
Mr. Briggs,
Chief
Justice
4th Aug.
1978
(Contd.)

Counsel for the respondents argued that the contracts are not building contracts, they are contracts which convey an interest in land, and indeed, that they are pre-dominately so. The building element in the contract has not displaced what was referred to as the "estate element". And the doctrine of frustration of contract has no application to such contracts though it is possible that it may apply to a lease.

There is no doubt that the contracts contemplated the sale of land. But they are far more than that. The conveyance is a formality though a necessary one. The purchaser wants a flat not an undivided share in a fraction of the land. There cannot be a sale at all until the flats have been built. At the time of the frustrating event, the purchaser had no estate in the land nor would they have until the flats had been completed. From their terms, the contracts, in my view, are clearly building contracts. This is always the case when, as here, the vendor and builder plans to build a housing estate and sells before building the houses. 10

In a striking phrase, counsel for the appellant said that the conveyance in such a case is the 'tail of the dog'. Until that point is reached there is no estate at all. The contract to grant a lease is executory and contingent until the building has been erected. 20

In the respondents' Notice a second matter was raised, that since the contracts in the words of the trial judge legislated for acts of God and unforeseen circumstances, the doctrine of frustration was thereby excluded. I do not agree with that interpretation of the contracts for the reasons given above.

I would allow this appeal with costs here and below. It follows that since the contracts have been frustrated the other orders made by the trial judge must be set aside and judgment entered for the appellants on the counterclaim for a declaration that the contracts have been frustrated and that the respondents, and each of them, are not entitled to interest as claimed or at all.

(Geoffrey Briggs) 30
President.

Wilmer, Q.C., Miller, Q.C. & C. Y. Lee (F. Zimmern & Co.) for appellant.
D. Chang & A. Li (Hwang & Co.) for respondents.

In the Court of Appeal
High Court
Hong Kong

1978 No. 4
(Civil)

No. 4
Judgment of
the
Honourable
Mr. Justice
Huggins
4th Aug.
1978

BETWEEN

CHINACHEM INVESTMENT CO. LTD.
and
CHEUNG KUNG-LEUNG
FOU YOU-SING

Appellant

Respondents

IN THE COURT OF APPEAL

1978 No. 5 10
(Civil)

BETWEEN

CHINACHEM INVESTMENT CO. LTD.
and
WONG LAI-YING AND OTHERS

Appellant

Respondents

Coram: Briggs, C.J., Huggins and Pickering, JJ.A.

JUDGMENT

Huggins, J.A.:

I am of the same opinion.

I think it is convenient to deal first with the contention raised by the Respondents' Notice that this contract could not be frustrated because it was a contract for the sale and purchase of land and the landslide was clearly not an event which rendered impossible the transfer of the Vendor's interest to the Purchasers. That these were far more than simple contracts for the sale of land is apparent from the words of Clause 1: it related not only to

“all those eleven equal undivided 1,613th parts or shares of and in all that piece or parcel of ground...registered in the Land Office as Inland Lot No. 3171....”

but also to the like shares in

“the messuages erections and buildings now in the course of being erected thereon...together with the sole and exclusive right to hold use occupy and enjoy all that apartment...of the said [building] which said building the vendor agrees to complete in manner hereinafter mentioned.”

Our law does not recognize the possibility of the ownership of a flat separate from an interest in the land which supports it and the parties therefore adopted the usual conveyancing technique of annexing the flat to an undivided share in the site. It would be unrealistic to assume that, because the undivided shares in the site were a necessary adjunct to the sales of the flats, they constituted the substantial subject matter of the contracts. What the purchasers wanted were flats to live in and this was well known to the Vendor. Unless the Vendor had agreed to build the flats it is inconceiva-

In the Court
of Appeal
High Court
Hong Kong

No. 4
Judgment of
the
Honourable
Mr. Justice
Huggins
4th Aug.
1978
(Contd.)

ble that these Purchasers would have contracted to buy undivided shares in the site. Clause 22, which formed the basis of the learned judge's conclusion, itself contemplates a situation where the Vendor "becomes unable to sell the said undivided shares *and apartment*" (the emphasis is mine). Clause 3(2) entitled the Purchasers to rescind upon the Vendor's failure to finish the building within an ascertainable time, thus showing that the building was a fundamental part of the contract. The substance of these agreements was the sale and purchase of flats and it is no answer to the argument that the agreements have been frustrated that a contract for the sale of an estate in land cannot be frustrated, at least unless some cataclysmic event causes the land to sink beneath the sea. It is true that this was not "a building contract" in the sense in which that phrase is normally employed: it was, in substance, a contract for the sale of something to be built. I am prepared to accept for the purposes of this case that an agreement for a lease cannot be frustrated (*Cricklewood Property and Investment Trust Ltd. v. Leighton's Investment Trust Ltd.* 1945 A.C. 221) but I see no reason why a contract of the general type in question here should not. Just as in *Denny, Mott and Dickson v. James B. Fraser & Co. Ltd.* 1944 A.C. 265 the main object of the agreement was trading, although there was also provision for the purchase or letting of the timber yard, so here the main object of the agreement was provision of a residence.

10

Although the ultimate issue in each case must be whether the particular event has frustrated the particular contract, I am content to approach the matter initially in two stages. However, I prefer not to use the expression "a frustrating event" with reference to an event which does not frustrate a contract (for to do so seems to me to be courting confusion) and therefore I define the two stages thus:

20

1. Was the event which has been found to have occurred one for which the parties have provided by their contract?
2. If not, was it an event of such a nature that the continued performance of the contract would require one or both of the parties to do something so radically different from what was originally contemplated that it would be unjust to hold the parties still bound?

30

First I make two general comments. It was said by Lord Denning in *The Eugenia* 1964 2 Q.B. 226, 239:

"It has frequently been said that the doctrine of frustration only applies when the new situation is 'unforeseen' or 'unexpected' or 'uncontemplated,' as if that were an essential feature. But it is not so. The only thing that is essential is that the parties should have made no provision for it in their contract. The only relevance of it being 'unforeseen' is this: If the parties did not foresee anything of the kind happening, you can readily infer they have made no provision for it: whereas, if they did foresee it, you would expect them to make provision for it."

40

Here the landslide was accepted on all sides to have been unforeseen. Secondly, although I refer to the concept of "justice" it must be recognized that

"it is not hardship or inconvenience or material loss itself which calls the

In the Court
of Appeal
High Court
Hong Kong

No. 4
Judgment of
the
Honourable
Mr. Justice
Huggins
4th Aug.
1978
(Contd.)

principle of frustration into play. There must be as well such a change in the significance of the obligation that the thing undertaken would, if performed, be a different thing from that contracted for." (*Davis Contractors Ltd. v. Fareham Urban District Council* 1956 A.C. 696, 729).

Again it is convenient before turning to the Appellant's main submissions to deal with a contention raised by the Respondents' Notice, namely that the landslide was an event covered by Clause 3 of the agreement. Clause 3 expressly refers to "Acts of God" and "any other cause beyond the control of the Vendor", both expressions which prima facie might appear to describe the unforeseen disaster which occurred here. One must, however, read the clause as a whole and see whether it is quite plain that the parties had in mind such overwhelming events as would otherwise frustrate the contract. Wide as the words of para. (4) are I do not think the parties were, in effect, agreeing that nothing which might conceivably occur should frustrate this contract. The clause was concerned with the date for the finishing of the building and with the possibility that that date might be postponed. It is, of course, argued that in the event this building can and will be completed, but it does not follow that every delay, however long, is necessarily within the terms of the clause. When construing the words of a contract one is concerned to ascertain what was the intention of the parties. Clause 3(3) allows the Purchasers, if they do not rescind under para. (2), to wait until the building is finished and provides "in that event" for the payment of interest. On the assumption that the Purchasers do not have to wait until the building is finished before such interest becomes payable, this indicates that frustration of the contracts was a contemplated possibility, otherwise interest would be payable ad aeternum if building became impossible. Then the very fact that a maximum extension of 365 days in the aggregate might be granted by the architect in respect of delays caused by the specified events suggests that the parties had in mind delays which might reasonably be expected to result in "a limited interruption": see *Fibresa Spolka Akcyjna v. Fairbairn Lawson Combe Barbour Ltd.* 1943 A.C. 32, 40. In every case it must be very much a matter of general impression whether the event is one of a kind intended by the parties to be covered by the contract, but I have no doubt that the judge was right to decide that Clause 3 was not intended to cover such an event as this landslide.

Clause 22 was also drafted in very wide terms and provided that "should any unforeseen circumstances beyond the vendor's control arise whereby the Vendor becomes unable to sell..." the Vendor should be at liberty to rescind. The learned judge was persuaded that

"this clause provides for circumstances which render performance of the agreements impossible. When these happened the defendant had an opportunity to rescind the agreements forthwith by returning the purchase price already paid. Thus the parties had applied their minds to unforeseen events which might cause an impossibility of performance subject to certain conditions. That being so, even the unforeseen and impossibility (sic) have been provided for in the agreements. The parties must abide by the terms of contract for its determination."

I respectfully agree with him that the words in this clause are clear but, again, I do not think they must be read as providing that no unforeseen circumstances beyond

In the Court
of Appeal
High Court
Hong Kong

No. 4
Judgment of
the
Honourable
Mr. Justice
Huggins
4th Aug.
1978
(Contd.)

the Vendor's control should frustrate the contract. In this respect the case is very similar to *Bank Line Ltd. v. Arthur Capel & Co.* 1919 A.C. 435: Clause 22 is similar in effect to Clause 31 of the charterparty there in question, under which it was held that "the charterers might cancel at once without having to show that the detention was likely to last so long as to put an end to the contract within the meaning of the authorities" (p. 443). The basis of this reasoning is that, although the issue of frustration has to be decided upon the probabilities as they must have appeared to "informed and experienced minds" at the date of the event in question, of necessity the court decides the issue *ex post facto* when it is often possible to see the actual results of the event. Thus by exercising the power of rescission under Clause 22 the Vendor might have avoided the present dispute as to frustration, but the fact that he did not exercise the power does not mean that frustration may not already have occurred. Strictly, of course, if frustration had occurred the clause containing the power to rescind would have been avoided with the rest of the contract, but it is obviously convenient to provide a means whereby litigation concerning the difficult issue of frustration may be rendered unnecessary: it would have mattered little to the parties whether the contract was rescinded by the Vendor or avoided by frustration and the sooner they knew their rights and obligations the better for everyone. The inclusion of a clause such as Clause 31 in the Bank Line charterparty or Clause 22 of the Agreement in this case is, therefore, not inconsistent with the operation of the doctrine of frustration and does not show an intention that that doctrine shall not apply. 10

It remains to decide whether the landslide was of such a nature that the continued performance of the contract would require one or both of the parties to do something so radically different from what was originally contemplated that it would be unjust to hold the parties still bound. Had he not concluded that it was an event which had been fully provided for by the terms of the contract, I think it is clear that the learned trial judge would have held that it was. With that I would agree. This was no minor landslip confined to the site of the building itself. It must have been immediately apparent that further operations not only on that site but on all sites in the Mid-levels might be delayed indefinitely and might even be impossible, either physically or by virtue of Government intervention. As Mr. Brian Boys said, even five months later it was not known whether a building on the site could be allowed to exceed three storeys, although I read his evidence as indicating that by then there was no doubt building of some kind would eventually be allowed, provided that extensive tests were first carried out. Had the position appeared similarly in June 1972 it would still have been uncertain whether an agreement to sell, for example, a flat on the 6th floor could be performed within the life time of its would-be purchaser. It is not every delay the duration of which at the outset is uncertain that will frustrate a contract: *Braemount Steam Ship Co. v. Weir & Co.* (1910) 15 Com. Cas. 101. What is required is an interruption which appears likely to be 30 40

"so long as to destroy the identity of the work or service, when resumed, with the work or service when interrupted": per Lord Dunedin in *Metropolitan Water Board v. Dick Kerr & Co. Ltd.* 1918 A.C. 119, 128.

In that case there was something more than a delay of uncertain duration, for the direction to comply with the instructions of the Director of Factory Construction as to the plant and labour on which the contractor was depending for the performance of his part of the contract was an added factor. More assistance is, therefore, to be

In the Court
of Appeal
High Court
Hong Kong

No. 4
Judgment of
the
Honourable
Mr. Justice
Huggins
4th Aug.
1978
(Contd.)

obtained from *Bank Line Ltd. v. Arthur Capel & Co.* supra, where delay was the sole result of the event which happened. The date for delivery of the vessel under the charterparty for twelve months was “not before 1st April 1915” and there was an option for the charterers to cancel the contract if delivery had not been made by 30th April 1915. On 11th May, the vessel not having been delivered and the charterers not having exercised their option, an order of requisition was made. On 17th August the government indicated that it would release the vessel so that she might be sold, provided that a replacement was supplied, and she was in fact released on 2nd September. The House of Lords held that the charterparty had been frustrated. Lord Finlay, L.C., said at p. 442:

10

“A charter for twelve months from April is clearly very different from a charter for twelve months from September”.

Lord Sumner observed at p. 458 that

“Delay even of considerable length and of wholly uncertain duration is an incident of maritime adventure, which is clearly within the contemplation of the parties, such as delay caused by ice or neaping, so much so as to be often the subject of express provision”.

Nevertheless he, too, thought that delay resulting from requisition frustrated a charterparty for twelve months, for the requisitioning

“destroyed the identity of the chartered service and made the charter as a matter of business a totally different thing. It hung up the performance for a time, which was totally indefinite and probably long. The return of the ship depended on considerations beyond the ken or control of either party.”

20

Hirji Mulji v. Cheong Yue Steam Ship Co. Ltd. 1926 A.C. 497 merely shows that

“Whatever the consequences of the frustration may be upon the conduct of the parties, its legal effect does not depend on their intention or their opinions, or even knowledge, as to the event, which has brought this about, but on its occurrence in such circumstances as show it to be inconsistent with further prosecution of the adventure” (p. 509).

In that case “the parties were very sanguine”, as the Purchasers (and possibly the Vendor also) may have been here. Nevertheless, applying the test approved by Lord Sumner, I am satisfied that the landslide made the contract between the parties as a matter of business a totally different thing from that which they had contemplated.

30

I would allow the appeal.

4th August 1978.

In the Court of Appeal
High Court
Hong Kong

1978 No. 4
(Civil)

No. 5
Judgment of
the
Honourable
Mr. Justice
Pickering
4th Aug.
1978

BETWEEN

CHINACHEM INVESTMENT CO. LTD.
and
CHEUNG KUNG-LEUNG
FOU YOU-SING

Appellant

Respondents

IN THE COURT OF APPEAL

1978 No. 5 10
(Civil)

BETWEEN

CHINACHEM INVESTMENT CO. LTD.
and
WONG LAI-YING AND OTHERS

Appellant

Respondents

Coram: Briggs, C.J., Huggins and Pickering, JJ.A.
Date: 4th August, 1978.

JUDGMENT

Pickering, J.A.:

I am in agreement with the conclusion reached by the learned Chief Justice and desire to add only one further consideration which leads me to agree that these Agreements were frustrated. 20

Immediately following the landslide the appellants, despite some encouraging circulars which they issued, could not have known when they would be permitted to enter on the site again, if ever. Nor, whether if permitted re-entry, what type of building they would be permitted to erect, if any. It was entirely possible that they would never gain access to the site or that if permitted access, they would not receive permission to build anything like the number or type of flats which they had contracted to build and to sell to the respondents. Yet had they been so debarred and had the respondents chosen not to rescind their Agreements, the appellants would have been liable under Clause 3 of the Agreements, to pay to each respondent interest at the rate of one per cent per month upon the purchase price or deposit paid — and that in perpetuity. For my part I cannot conceive that, in the words of Lord Haldane in *Bank Line Ltd. v. Arthur Capel & Co.*,¹ it is “quite plain” that the appellants had contracted for so bizarre a result. 30

For the reasons given by my Lord Chief Justice, and for this additional reason, I too would allow this appeal with costs here and below.

Wilmer, Q.C., Miller, Q.C. and C.Y. Lee (F. Zimmern & Co.) for Appellant.
D. Chang and A. Li (Hwang & Co.) for Respondents.

(1) 1919 A.C. 435 at 445.

40

In the Court
of Appeal
High Court
Hong Kong

IN THE COURT OF APPEAL
CIVIL APPEAL NO. 4 OF 1978
(ON APPEAL FROM HIGH COURT ACTION NO. 2738 OF 1975)

No. 6
Order of
Court of
Appeal
4th Aug.
1978

BETWEEN

CHINACHEM INVESTMENT CO. LTD. Appellant
(Defendant)
and
CHEUNG KUNG LEUNG 1st Respondent
(1st Plaintiff)
FOU YOU SING 2nd Respondent
(2nd Plaintiff) 10

IN THE COURT OF APPEAL
CIVIL APPEAL NO. 5 OF 1978
(ON APPEAL FROM HIGH COURT ACTION NO. 2739 OF 1975)

BETWEEN

CHINACHEM INVESTMENT CO. LTD. Appellant
(Defendant)
and
Respondents
WONG LAI YING (1st Plaintiff) 20
MAN CHIU TONG (2nd Plaintiff)
CHUNG YUK WA, AGNES (3rd Plaintiff)
LEUNG SHING KWAN, CHARLES and
LAM SHUK HAN, MARGARET (4th Plaintiffs)
WONG MAN TAK and LUI LAI YING (5th Plaintiffs)
KWOK ON PONG (6th Plaintiff)
TAM KWOK CHEUNG, NG TACK MAY
and NG TACK MAY, Personal
Representative of NG MAY LAN deceased (7th Plaintiffs)
CHAN KAI SHIU and
LAI KWOK MEI, AMY (8th Plaintiffs) 30
TSENG HING YU (9th Plaintiff)
CHENG SI YIC and
CHEUNG LAI SUN, JULIANA (10th Plaintiffs)
LO KAM TO (11th Plaintiff)
LO KAI FAI (12th Plaintiff)
YIM YAN (13th Plaintiff)
CHAN KWAN SHEUNG (14th Plaintiff)
AU YEUNG CHUNG OI, BETTY (15th Plaintiff)
LAM TSANG SUK YEE (16th Plaintiff) 40
CHENG CHI CHION (17th Plaintiff)
LI YU TUNG (18th Plaintiff)
TSANG SUK YEE (19th Plaintiff)
LOCK CHEUNG HELEN (20th Plaintiff)
TO SAI MUI (21st Plaintiff)
TSANG YUK KING (22nd Plaintiff)
LOKE YIP NGOI YAN (23rd Plaintiff)
NG HOI MING (24th Plaintiff)

In the Court
of Appeal
High Court
Hong Kong

No. 6
Order of
Court of
Appeal
4th Aug.
1978
(Contd.)

**BEFORE THE HONOURABLE SIR GEOFFREY BRIGGS,
CHIEF JUSTICE MR. JUSTICE HUGGINS AND
MR. JUSTICE PICKERING IN COURT**

ORDER

Dated the 4th day of August 1978

Upon motions by way of appeal from the judgment in Action No. 2738 of 1975 and from the judgment in Action No. 2739 of 1975 both dated the 3rd day of December 1977 made unto this Court by Counsel for the Defendant

And upon hearing Counsel for the Defendant and for the Plaintiffs

And upon reading the said Judgment dated the 3rd day of December 1977 10

This Court did order that the said appeal should stand for judgment

And the said appeal standing this day for judgment in the presence of Counsel for the Defendant and for the Plaintiffs

The Court doth order that this appeal be allowed and that the said judgments of the Honourable Mr. Justice Li dated the 3rd day of December 1977 for the said Plaintiffs be set aside and judgment entered for the said Defendant for a declaration that the divers agreements entered into between the Defendant and the Plaintiffs in respect of the sale and purchase of various equal undivided parts of and in Inland Lot No. 8171 and of and in the building which is in the course of being erected thereon known as "University Heights" have been frustrated 20

And it is ordered that the question of costs and the question of interests on the money paid by the Plaintiffs under the terms of the agreements be adjourned to a date to be fixed not before the 7th day of November 1978 for argument.

S. H. Mayo (L.S.)
Registrar.

In the Court
of Appeal
High Court
Hong Kong

IN THE COURT OF APPEAL
CIVIL APPEAL NO. 5 OF 1978
(ON APPEAL FROM HIGH COURT ACTION NO. 2739 OF 1975)

No. 7
Further
Order of
Court of
Appeal
9th Nov.
1978

BETWEEN

CHINACHEM INVESTMENT CO. LTD.

Appellant
(Defendant)

and

WONG LAI YING
MAN CHIU TONG
CHUNG YUK WA, AGNES
LEUNG SHING KWAN, CHARLES and
LAM SHUK HAN, MARGARET
WONG MAN TAK and LUI LAI YING
KWOK ON PONG
TAM KWOK CHEUNG, NG TACK MAY
and NG TACK MAY, Personal
Representative of NG MAY LAN deceased
CHAN KAI SHIU and
LAI KWOK MEI, AMY
TSENG HING YU
CHENG SI YIC and
CHEUNG LAI SUN, JULIANA
LO KAM TO
LO KAI FAI
YIM YAN
CHAN KWAN SHEUNG
AU YEUNG CHUNG OI, BETTY
LAM TSANG SUK YEE
CHENG CHI CHION
LI YU TUNG
TSANG SUK YEE
LOCK CHEUNG HELEN
TO SAI MUI
TSANG YUK KING
LOKE YIP NGOI YAN
NG HOI MING

Respondents
(1st Plaintiff)
(2nd Plaintiff)
(3rd Plaintiff)
(4th Plaintiffs)
(5th Plaintiffs)
(6th Plaintiff)

10

(7th Plaintiffs)

(8th Plaintiffs)
(9th Plaintiff)

20

(10th Plaintiffs)

(11th Plaintiff)

(12th Plaintiff)

(13th Plaintiff)

(14th Plaintiff)

(15th Plaintiff)

(16th Plaintiff)

(17th Plaintiff)

(18th Plaintiff)

(19th Plaintiff)

(20th Plaintiff)

(21st Plaintiff)

(22nd Plaintiff)

(23rd Plaintiff)

(24th Plaintiff)

30

**BEFORE THE HONOURABLE SIR GEOFFREY BRIGGS
CHIEF JUSTICE, THE HONOURABLE MR. JUSTICE HUGGINS
AND THE HONOURABLE MR. JUSTICE PICKERING**

40

ORDER

On Thursday 9th November 1978

Upon hearing Counsel for the Appellant and Counsel for the Respondents
IT IS ORDERED.

In the Court
of Appeal
High Court
Hong Kong

No. 7
Further
Order of
Court of
Appeal
9th Nov.
1978
(Contd.)

1. That the Appellant do pay to the Respondents interest at the rate of 8% per annum on all sums paid by the Respondents respectively to the Appellant such interest to run from the respective dates of payment by the Respondents until the date of repayment of the said sums by the Appellant to the Respondents;
2. That the Order to pay out sum now in Court be stayed until further order;
3. That the Appellant's costs here and in the Court below be taxed and paid by the Respondents save that the Appellant shall not be entitled to be paid any costs as are exclusively referable to Action No. 2738 of 1975 and Civil Appeal No. 4 of 1978;
4. That the matter be certified fit for 2 Counsel; and
5. That there be liberty to apply.

10

S.H. Mayo (L.S.)
Registrar

In the Court
of Appeal
High Court
Hong Kong

No. 5 of 1978
(Civil)

No. 8
Notice of
Motion for
leave to
appeal to
Privy
Council
11th Aug.
1978

IN THE COURT OF APPEAL

BETWEEN

CHINACHEM INVESTMENT CO. LTD.

Appellant

and

WONG LAI-YING AND OTHERS

Respondents

NOTICE OF MOTION FOR LEAVE TO APPEAL

TAKE NOTICE that the Court of Appeal will be moved on Thursday the 9th of November 1978 at 9:30 o'clock in the forenoon at the sitting of the Court or so soon thereafter as Counsel can be heard, by Counsel on behalf of the abovenamed Respondents for an order that leave be granted to the Respondents to appeal to Her Majesty the Queen in Her Privy Council from the judgment of this Honourable Court pronounced by the Court on the 4th day of August 1978 the Respondents undertaking to comply with the provisions of the Rules and Instructions concerning Appeals to Her Majesty the Queen in Her Privy Council. 10

Dated the 11th day of August 1978.

(Sd.) ROBERT TANG
Counsel for the Respondents

To the abovenamed Appellant Chinachem Investment Co. Ltd. and its Solicitors Messrs. F. Zimmern & Co. Hong Kong. 20

In the Court
of Appeal
High Court
Hong Kong

IN THE COURT OF APPEAL
CIVIL APPEAL NO. 5 OF 1978
(ON APPEAL FROM HIGH COURT ACTION NO. 2739 OF 1975)

No. 9
Order for
conditional
leave to
appeal to
Privy
Council
9th Nov.
1978

BETWEEN

CHINACHEM INVESTMENT CO. LTD.

Appellant
(Defendant)

and

WONG LAI YING
MAN CHIU TONG
CHUNG YUK WA, AGNES
LEUNG SHING KWAN, CHARLES and
LAM SHUK HAN, MARGARET
WONG MAN TAK and LUI LAI YING
KWOK ON PONG
TAM KWOK CHEUNG, NG TACK MAY
and NG TACK MAY, Personal
Representative of NG MAY LAN, deceased
CHAN KAI SHIU and LAI KWOK MEI, AMY
TSENG HING YU
CHENG SI YIC and
CHEUNG LAI SUN, JULIANA
LO KAM TO
LO KAI FAI
YIM YAN
CHAN KWAN SHEUNG
AU YEUNG CHUNG OI, BETTY
LAM TSANG SUK YEE
CHENG CHI CHION
LI YU TUNG
TSANG SUK YEE
LOCK CHEUNG HELEN
TO SAI MUI
TSANG YUK KING
LOKE YIP NGOI YAN
NG HOI MING

Respondents
(1st Plaintiff)
(2nd Plaintiff)
(3rd Plaintiff)
(4th Plaintiffs)
(5th Plaintiffs)
(6th Plaintiff)

10

(7th Plaintiffs)
(8th Plaintiffs)
(9th Plaintiff)

20

(10th Plaintiffs)
(11th Plaintiff)
(12th Plaintiff)
(13th Plaintiff)
(14th Plaintiff)
(15th Plaintiff)
(16th Plaintiff)
(17th Plaintiff)
(18th Plaintiff)
(19th Plaintiff)
(20th Plaintiff)
(21st Plaintiff)
(22nd Plaintiff)
(23rd Plaintiff)
(24th Plaintiff)

30

**BEFORE THE HONOURABLE SIR GEOFFREY BRIGGS
CHIEF JUSTICE, THE HONOURABLE MR. JUSTICE HUGGINS
AND THE HONOURABLE MR. JUSTICE PICKERING**

ORDER

40

On Thursday 9th November 1978

Upon the application of the Respondents by way of notices of motion filed herein on the 12th day of August 1978 and upon hearing Counsel for the Respondents and for the Appellant IT IS ORDERED that the Respondents do have leave to appeal to her Majesty in Council from the judgment of the Court of Appeal given

In the Court
of Appeal
High Court
Hong Kong

No. 9
Order for
conditional
leave to
appeal to
Privy
Council
9th Nov.
1978
(Contd.)

on the 4th day of August 1978 CONDITIONAL upon the Appellants within 7 days from the date hereof entering into good and sufficient security to the satisfaction of the Court in the sum of \$1.00 for the due prosecution of the Appeal and payment of costs and upon the Record of Appeal being prepared and dispatched to England within 3 months from the date hereof. AND IT IS FURTHER ORDERED that the costs of this application be costs in the Appeal.

(Sd.) S.H. Mayo (L.S.)
Registrar.

In the Court
of Appeal
High Court
Hong Kong

IN THE COURT OF APPEAL
CIVIL APPEAL NO. 5 OF 1978
(ON APPEAL FROM HIGH COURT ACTION NO. 2739 OF 1975)

No. 10
Notice of
Motion to
extend time
for preparing
and
despatching
the Record
of
Proceedings
to England
15th Jan.
1979

BETWEEN:

CHINACHEM INVESTMENT CO. LTD.	Appellant (Defendant)	
and	Respondents	
WONG LAI YING	(1st Plaintiff)	
MAN CHIU TONG	(2nd Plaintiff)	
CHUNG YUK WA, AGNES	(3rd Plaintiff)	10
LEUNG SHING KWAN, CHARLES and LAM SHUK HAN, MARGARET	(4th Plaintiffs)	
WONG MAN TAK and LUI LAI YING	(5th Plaintiffs)	
KWOK ON PONG	(6th Plaintiff)	
TAM KWOK CHEUNG, NG TACK MAY and NG TACK MAY, Personal Representative of NG MAY LAN deceased	(7th Plaintiffs)	
CHAN KAI SHIU and LAI KWOK MEI, AMY	(8th Plaintiffs)	20
TSENG HING YU	(9th Plaintiff)	
CHENG SI YIC and CHEUNG LAI SUN, JULIANA	(10th Plaintiffs)	
LO KAM TO	(11th Plaintiff)	
LO KAI FAI	(12th Plaintiff)	
YIM YAN	(13th Plaintiff)	
CHAN KWAN SHEUNG	(14th Plaintiff)	
AU YEUNG CHUNG OI, BETTY	(15th Plaintiff)	
LAM TSANG SUK YEE	(16th Plaintiff)	
CHENG CHI CHION	(17th Plaintiff)	30
LI YU TUNG	(18th Plaintiff)	
TSANG SUK YEE	(19th Plaintiff)	
LOCK CHEUNG HELEN	(20th Plaintiff)	
TO SAI MUI	(21st Plaintiff)	
TSANG YUK KING	(22nd Plaintiff)	
LOKE YIP NGOI YAN	(23rd Plaintiff)	
NG HOI MING	(24th Plaintiff)	

TAKE NOTICE that the full Court will be moved on Tuesday, the 23rd day of January 1979 at 9.30 o'clock in the forenoon or so soon thereafter as Counsel can be heard, by Counsel on behalf of the Respondents for an Order extending the time for preparing and despatching the Record of these Proceedings to England for a further period of two months from the 8th of February 1979. 40

Dated the 15th day of January 1979.

In the Court of Appeal
High Court
Hong Kong

This Notice is taken out by Messrs.
Victoria Y. Chan & Co., of 8th floor,
Siberian Building, 29 Des Voeux Road,
Central, Hong Kong.

No. 10
Notice of
Motion to
extend time
for preparing
and
despatching
the Record
of
Proceedings
to England

To the abovenamed Appellant and
Messrs. F. Zimmern & Co., Solicitors
for the Appellant.

(Estimated time not exceeding 30 minutes).

15th Jan.
1979
(Contd.)

In the Court
of Appeal
High Court
Hong Kong

IN THE COURT OF APPEAL
CIVIL APPEAL NO. 5 OF 1978
(ON APPEAL FROM HIGH COURT ACTION NO. 2739 OF 1975)

No. 11
Order to
extend time
for
preparing
and
despatching
the Record
of
Proceedings
to England
23rd Jan.
1979

BETWEEN

CHINACHEM INVESTMENT CO. LTD.

Appellant
(Defendant)

and

WONG LAI YING
MAN CHIU TONG
CHUNG YUK WA, AGNES
LEUNG SHING KWAN, CHARLES and
LAM SHUK HAN, MARGARET
WONG MAN TAK and LUI LAI YING
KWOK ON PONG
TAM KWOK CHEUNG, NG TACK MAY
and NG TACK MAY, Personal
Representative of NG MAY LAN
deceased

Respondents
(1st Plaintiff)
(2nd Plaintiff)
(3rd Plaintiff)
(4th Plaintiffs)

10

CHAN KAI SHIU and
LAI KWOK MEI, AMY
TSENG HING YU
CHENG SI YIC and
CHEUNG LAI SUN, JULIANA

(8th Plaintiffs)
(9th Plaintiff)
(10th Plaintiffs)

20

LO KAM TO
LO KAI FAI
YIM YAN
CHAN KWAN SHEUNG
AU YEUNG CHUNG OI, BETTY
LAM TSANG SUK YEE
CHENG CHI CHION
LI YU TUNG
TSANG SUK YEE
LOCK CHEUNG HELEN
TO SAI MUI
TSANG YUK KING
LOKE YIP NGOI YAN
NG HOI MING

(11th Plaintiff)
(12th Plaintiff)
(13th Plaintiff)
(14th Plaintiff)
(15th Plaintiff)
(16th Plaintiff)
(17th Plaintiff)
(18th Plaintiff)
(19th Plaintiff)
(20th Plaintiff)
(21st Plaintiff)
(22nd Plaintiff)
(23rd Plaintiff)
(24th Plaintiff)

30

**BEFORE THE HONOURABLE SIR GEOFFREY BRIGGS CHIEF
JUSTICE, THE HONOURABLE MR. JUSTICE HUGGINS AND
THE HONOURABLE MR. JUSTICE PICKERING IN COURT**

40

ORDER

UPON hearing Counsel for the Appellant and Counsel for the Respondents and BY CONSENT IT IS ORDERED that the time for preparing and despatching the Record of Proceedings to England be extended for a further period of two months as from the 8th of February 1979 and that the costs of this Application be costs in

In the Court the cause of the Appeal.
of Appeal
High Court
Hong Kong

Dated the 23rd day of January, 1979.

No. 11
Order to
extend time
for
preparing
and
despatching
the Record
of
Proceedings
to England
23rd Jan.
1979
(Contd.)

(Sd.) S. H. Mayo (L.S.)
Registrar.

**AGREED BUNDLE OF DOCUMENTS
BETWEEN PLAINTIFFS AND DEFENDANT
IN HIGH COURT ACTION NO. 2739 OF 1975**

Supreme Court of Hong Kong

No. referred to in the agreed bundle 7 Instruction form 7/1/72



華懋置業有限公司 CHINACHEM INVESTMENT COMPANY LIMITED

To: F. ZIMMERN & Co. 402, Holland House, Hong Kong

香港雪廠街九號三一四室 TEL. H-225608 H-232803 Selling agents for

A No 00270

成交通知書 INSTRUCTION FORM

Date 7th JAN, 1972

請照下列內容條件辦理合約: We have agreed to sell and the undersigned Purchaser has agreed to purchase the premises upon the terms and conditions herein after described. Please engross Agreement upon the following terms and conditions:-

PURCHASER: 梁海明先生 MR. NG HOI MING
ADDRESS: 香港灣仔軒尼詩道 468 號 2 樓 TEL H 760 330
PREMISES: 香港旭和道 地盤 817 號 大學閣 B4 座 1 樓 (5/F)
PRICE: 壹拾玖萬貳仟柒佰捌拾元正 連車位 C.P.D.C 11 號
DEPOSIT: 樓價 8192,780 元 (不另發收據)
PAYMENT TERMS: 定金 83,000 元 (即付恆生支票 #1254 收作案)

取消大廈泳池已

首期 825,917 元 (由 14/1/72 - 12/2/72 年前清付, 騰 12 個月利息)
二期 828,917 元 (於地腳石庫完成七天內清付)
三期 819,278 元 (於陸橋樓面石庫完成七天內清付)
肆期 819,278 元 (於拾貳樓樓面石庫完成七天內清付)
餘款 896,390 元 (於有入伙紙七天內清付)
以上各期付款逾期以月息 12% 計算利息

交易日期 COMPLETION:

有入伙紙及全部樓價付清後辦理簽契手續。 Upon full payment of the purchase price herein and upon the issue of the Occupation Permit in respect of the said premises.

附註 REMARKS:

- (1) 由即日起三天內到香港雪廠街九號荷蘭行五樓四〇二室施文律師樓洽治安師簽處簽訂合約, 訂購規則及付款辦法須遵照該律師樓所擬定之合約辦理;
(2) 倘訂購人逾時不簽合約, 則照下列條款辦理。
(3) 印花稅, 律師費及一切有關買賣之合約, 契據, 住戶公約, 圖則及其他費用由購買人負責。

Purchaser 梁海明

For Vendor 經手人

Supreme
Court of
Hong Kong

No. referred
to in the
agreed
bundle
7

English
translation
7/1/72

CHINACHEM INVESTMENT COMPANY LIMITED
Room 314, 9 Ice House Street, Hong Kong
TEL. H-225608 H-232803

TO: F. ZIMMERN & CO.
402 Holland House
Hong Kong

Selling agents for

A No.00270

INSTRUCTION FORM

Date 7th Jan. 1972

We have agreed to sell and the undersigned Purchaser has agreed to purchase the premises upon the terms and conditions therein after described. Please engross Agreement upon the following terms and conditions:-

PURCHASER: Mr. NG HOI MING
ADDRESS: No.468 Hennessy Road, 1st floor, Wanchai, Hong Kong.TEL.H760330
PREMISES: Flat B4, 5th floor, University Heights, Lot No.8171 Kotewall Road, Hong Kong and Car Park C.P.D.C. No.11.
PRICE: \$192,780.00
DEPOSIT: PRICE \$192,780.00
PAYMENT TERMS: Deposit \$3,000.00 (by Hang Seng Bank Cheque No.113554)
1st Payment \$25,917.00 (must pay in full by 14/1/72-12/2/72. From 14/1/72 interest shall be charged at a monthly interest rate of 1.2%)
2nd Payment \$28,917.00 (pay in full within 7 days after the completion of the foundation in concrete)
3rd Payment \$19,278.00 (pay in full within 7 days after the completion of the 6th floor external structure in concrete)
4th Payment \$19,278.00 (pay in full within 7 days after the completion of the 12th floor external structure in concrete).
Remaining Payment \$96,390.00 (pay in full within 7 days of the issue of occupation permit)

The construction of swimming pool for this building has been cancelled.

Any delay in paying of the above mentioned payments interest shall be charged at a monthly interest rate of 1.2%

COMPLETION: Upon full payment of the purchase price herein and upon the issue of the Occupation Permit in respect of the said Premises.

REMARKS: (1) The said Agreement for sale and purchase shall be prepared by Messrs. F. Zimmern & Co. containing such terms and conditions as are commonly used and adopted by them.
(2) Pending the signing of such formal agreement, the following provisions shall take effect:-
(a) Should the Purchaser fail or refuse to sign the said formal agreement within three days from the date hereof, the deposit already paid shall be absolutely forfeited to the Vendor without any consent of the Purchaser whereupon the intended sale of the said premises to the Purchaser is considered cancelled and the Vendor shall be free to re-sell the same to such person or persons, or take any other action as the Vendor shall see fit.
(b) Notwithstanding any previous negotiations or receipt by the Vendor of the deposit paid hereunder, the Vendor shall be at liberty at any time before the signing of the said formal agreement to cancel the sale of the said premises to the Purchaser if the Vendor so desires and in such an event the Purchaser shall be entitled to the return of the deposit already paid but without interest compensation or costs.
(c) All stamp duty (including excess duty) legal costs and all other charges or expenses in respect of the agreement, assignment, deed of covenant and plans relating to the said premises shall be borne by the Purchaser solely. (Should there be any discrepancy, the English version shall prevail)

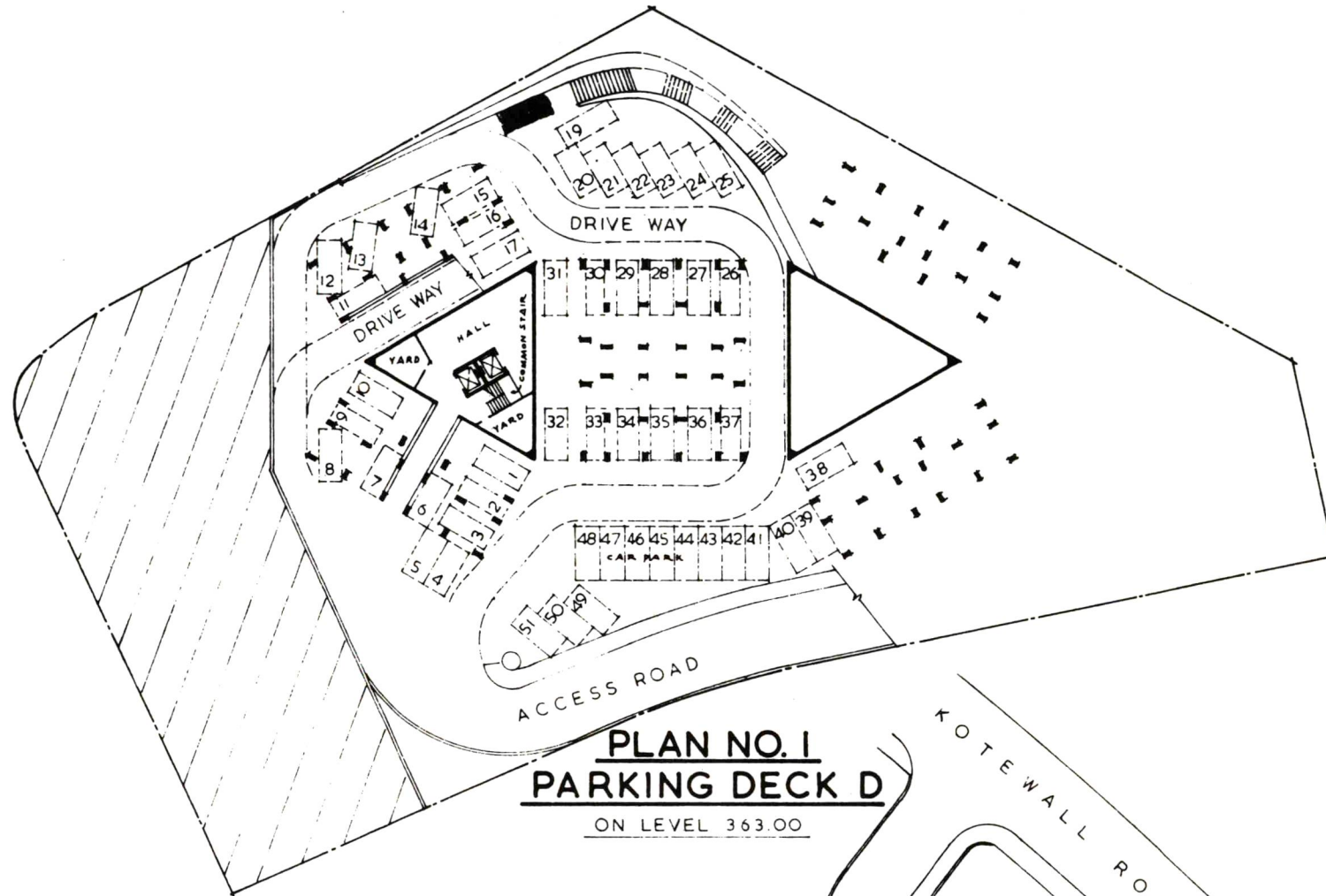
It is forbidden to construct, annex or destroy any flower stands, balcony ledges, etc. or to put on any paint other than the original which will affect the external appearance of the premises. The Stove has been canceled.

Please use registered letter for notification of change of address.

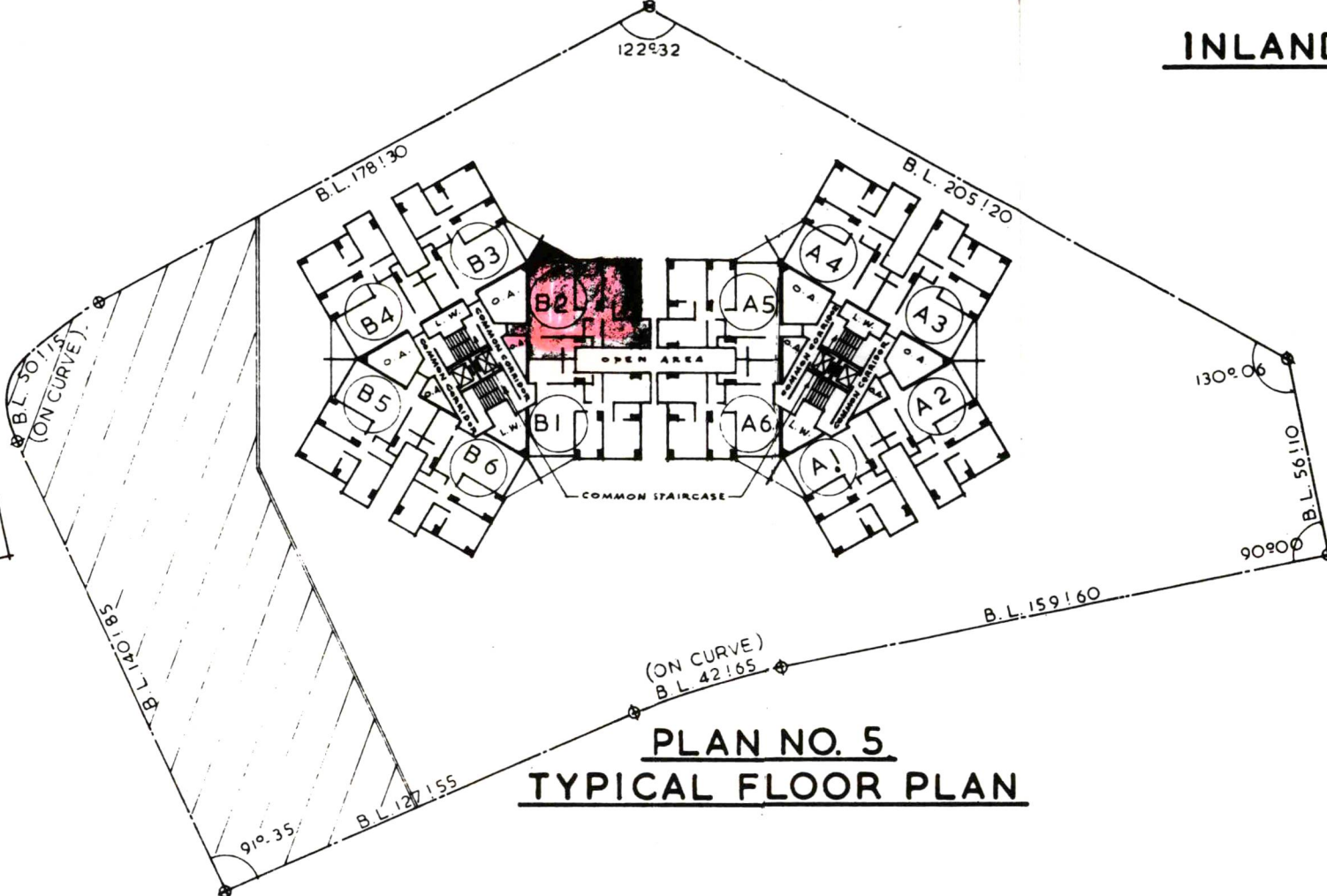
(Signature illegible)
Purchaser

(Signature illegible)
For Vendor

INLAND LOT NO. 8171

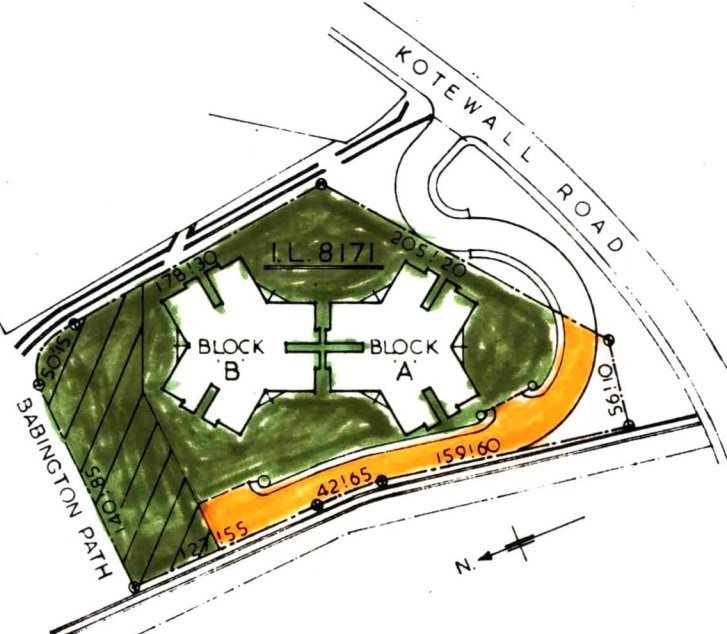


**PLAN NO. 1
 PARKING DECK D**
 ON LEVEL 363.00

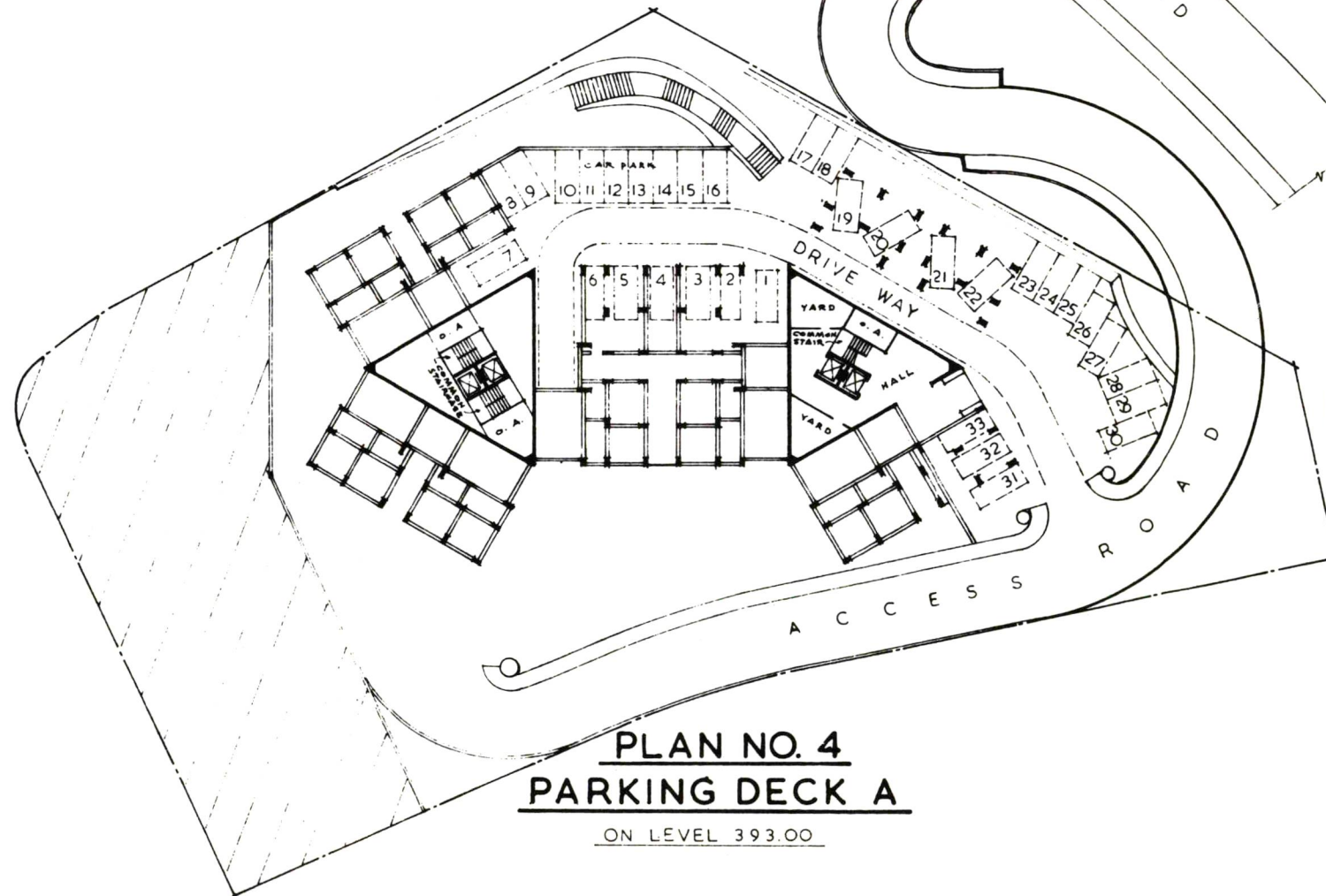


**PLAN NO. 5
 TYPICAL FLOOR PLAN**

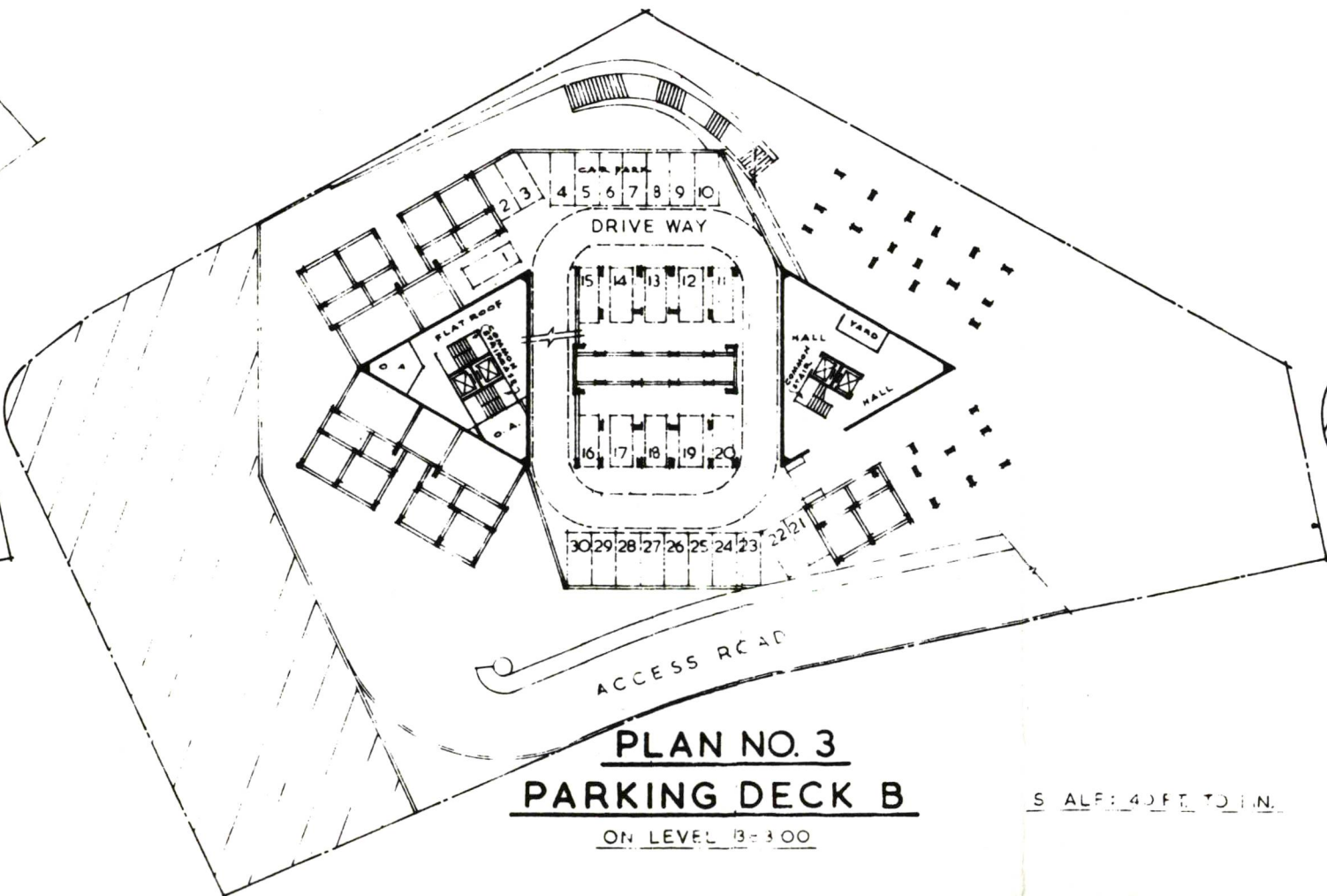
APART. FL.	B1	B2	B3	B4	B5	B6	A1	A2	A3	A4	A5	A6
12 TH												
11 TH												
10 TH												
9 TH												
8 TH												
7 TH												
6 TH												
5 TH												
4 TH												
3 RD												
2 ND												
1 ST												



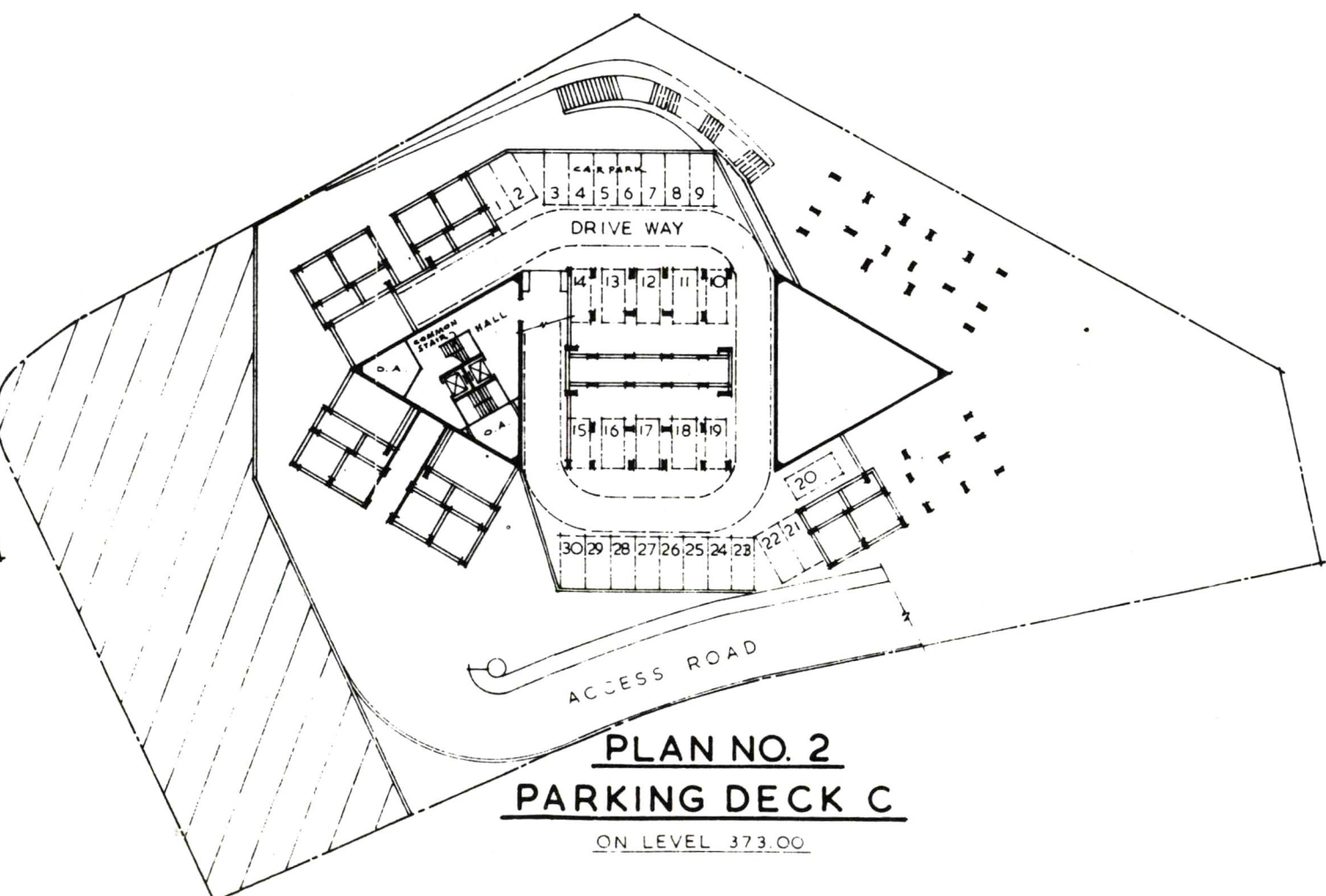
BLOCK PLAN
 SCALE: 100 FT. TO 1 IN.



**PLAN NO. 4
 PARKING DECK A**
 ON LEVEL 393.00



**PLAN NO. 3
 PARKING DECK B**
 ON LEVEL 373.00



**PLAN NO. 2
 PARKING DECK C**
 ON LEVEL 373.00

SCALE: 40 FT. TO 1 IN.

**AGREEMENT FOR SALE CHINACHEM INVESTMENT
COMPANY LIMITED TO WONG LAI YING**

No. referred
to in the
agreed
bundle
35
Agreement
for sale
Chinachem
Investment
Company
Limited
to Wong Lai
Ying (1st
Plaintiff
in H.C.
2739/75)
20/3/71

AN AGREEMENT is made the 20th day of March One thousand nine hundred and seventy one BETWEEN CHINACHEM INVESTMENT COMPANY LIMITED whose registered office is situate at Victoria in the Colony of Hong Kong (hereinafter called "the Vendor") of the one part and WONG LAI YING (黃麗英) of Flat 7 on 5th floor, Alhambra Building, Kowloon, Married Woman (hereinafter called "the Purchaser") of the other part

NOW IT IS HEREBY AGREED AS FOLLOWS:—

1. The Vendor shall sell and the Purchaser shall purchase ALL THOSE eleven equal undivided 1613th parts or shares of and in ALL THAT piece or parcel of ground (more particularly delineated on the Block plan hereto annexed and thereon coloured green and green hatched brown) registered in the Land Office as INLAND LOT No. 8171 (hereinafter called "the said Land") and of and in the messuages erections and buildings now in the course of being erected thereon and to be known as UNIVERSITY HEIGHTS (hereinafter referred to as "the said Building") in accordance with the plans and specifications approved by the Building Authority 10

TOGETHER with the sole and exclusive right to hold use occupy and enjoy ALL THAT Apartment "B2" on the 6th FLOOR and CAR PARKING SPACE No. 18 on Deck "D" of the said "University Heights" as shown and coloured pink on the plan hereto annexed (hereinafter called "the said Apartment") which said building the Vendor agrees to complete in manner hereinafter mentioned. 20

AND TOGETHER ALSO with:—

- (a) the right in common with the Vendor and the owners and occupiers of other apartments and units in the said buildings and all persons authorised by them respectively to use for the purposes of access to and egress from the said apartment the entrance halls, lifts, staircases and landings in the said buildings and such of the passages therein as are not included in any other apartment units in the said building or are not reserved to the Vendor as hereinafter provided, 30
- (b) the free and uninterrupted passage and running of water, sewage, gas and electricity from and to the said Apartment through the sewers, drains, watercourses, cables, pipes and wires which now are or may at any time hereafter be in under or passing through the said land or any other portion of the said building, and
- (c) all other rights, rights of way (if any) privileges, easements and appurtenances thereto belong or appertaining or therewith at any time held used occupied or enjoyed.

EXCEPTED & RESERVED and subject to the rights referred to in Clause 9 (A) and (B) hereof. 40

Supreme Court of Hong Kong
No. referred to in the agreed bundle 35
Agreement for sale Chinachem Investment Company Limited to Wong Lai Ying (1st Plaintiff in H.C. 2739/75) 20/3/71 (Contd.)

2. (a) The purchase price shall be \$112,875.00 (Dollars one hundred and twelve thousand eight hundred and seventy five only) which shall be paid by the Purchaser to the Vendor in the manner specified in the Schedule hereto.
- (b) Without prejudice to any other remedy hereunder, the Vendor shall be entitled to demand payment of interest on the whole amount of any instalment specified in the Schedule hereto not paid on due date at the rate of \$1.20 per month for each \$100 or part thereof unpaid calculated from the date on which the same should have been paid to the date of payment.
- (c) Notwithstanding any provision in the Schedule hereto for payment of the purchase money by instalments the Vendor shall be entitled at any time on or after the issue of the Occupation Permit for the said buildings to require the Purchaser to complete the sale and purchase within 14 days of notification to the Purchaser and, at the option of the Vendor, to raise and secure the balance of the purchase price by entering into a first legal mortgage of the said undivided shares and the said exclusive right to the said Apartment in favour of a mortgagee nominated by the Vendor the scale legal charges, stamp duties, registration fees and other expenses (if any) of and incidental to every such mortgage shall be borne by the purchaser. 10
- (d) If the Purchaser shall fail to complete the purchase by entering into a mortgage as aforesaid or by paying up the whole balance of the purchase price without such a mortgage, he shall be in default and the provisions of Clause 7 hereof shall then apply. 20
3. (1) The Vendor shall comply with the requirement of the Building Authority and of the director of Public Works relating to the said building and shall complete the building within the period of eighteen months from the date of the issue by the Building Authority of a permit of commencement of building works.
- (2) If the Vendor shall fail to complete the said building within the period as aforesaid or such further period as may be allowed under sub-paragraph (4) hereof, the Purchaser shall be entitled on giving to the Vendor not less than 14 days notice in writing in that behalf to rescind this Agreement and on the expiry of such notice this Agreement shall be rescinded and the Vendor shall repay to the Purchaser all amounts paid by the Purchaser hereunder together with interest thereon at the rate of one per cent per calendar month from the date or dates on which such amounts were paid to the date of repayment the payment of such amount and interest to be in full and final settlement of all claims by the Purchaser against the Vendor hereunder. 30
- (3) If the Vendor shall fail to complete the said building within the said period of eighteen months as aforesaid (subject to such extension as may be granted by the Architect under sub-paragraph (4) hereof) the Purchaser shall have the option notwithstanding any extension of time or further 40

Supreme
Court of
Hong Kong

No. referred
to in the
agreed
bundle
35
Agreement
for sale
Chinachem
Investment
Company
Limited
to Wong Lai
Ying (1st
Plaintiff
in H.C.
2739/75)
20/3/71
(Contd.)

period granted as aforesaid either to rescind this Agreement in which event the above-mentioned provisions for rescission shall apply or to wait for the completion of the building in which event the Vendor shall pay to the Purchaser interest at the rate of one per cent per calendar month on all amounts paid hereunder from the expiry date of completion of the building (subject to such extension as aforesaid) until the date of the completion of the said building.

- (4) The Architect shall grant such extension of time for the completion of the said building beyond the said eighteen months as aforesaid (not exceeding in any event 365 days in the aggregate) as shall appear to the Architect to be reasonable having regard to delay caused by any of the following, that is to say:— 10
- (a) Strike or lockout of workmen,
 - (b) Bad weather,
 - (c) Riots or civil commotion,
 - (d) Force Majeure or Act of God,
 - (e) Delay in completing the foundations due to water rock or similar obstruction or difficulty,
 - (f) Delay in connecting drainage or water pipes in dealing with the application for permit of commencement of building works or occupation permit or attributable to the Public Works Department or any other Department or Authority concerned, 20
 - (g) Default of contractors or subcontractors,
 - (h) Act of the Queen's enemies and
 - (i) Any other cause beyond the control of the Vendor.

4. So soon as the said buildings shall be completed the Vendor shall forthwith instruct the Architects to apply for an occupation permit in respect thereof. Upon the issue of the occupation permit the Vendor shall forthwith give notice in writing to the Purchaser and, provided no instalment of purchase money is then in arrear, the Purchaser shall then be entitled to enter into occupation of the said Apartment and to the receipt of the rent and profits thereof subject to the following terms:— 30

- (a) Until payment by the Purchaser of the full purchase price and the execution by the Purchaser of the assignment in accordance with Clause 5 hereof, the Purchaser shall occupy the said Apartment as licensee at will of the Vendor only and shall not let the said Apartment or any part or parts thereof or part with the possession of the same to any other person.
- (b) The Purchaser shall deposit with the Management Company referred to in Clause 16(a) hereof the sum of \$300.00 for each apartment occupied as a standing deposit by way of security for payment of monthly service charge payable in accordance with the Deed of Mutual Covenant hereinafter mentioned. 40
- (c) The Purchaser shall comply with all the terms and conditions of the said Deed of Mutual Covenant as if he were a party thereto and the assignment to him had been completed and, in particular, but without limiting

the foregoing, shall pay all outgoings in respect of the Apartment and his due proportion of all amounts payable in accordance with the said Deed of Mutual Covenant as if he had completed the purchase and executed such Deed.

- (d) If the Purchaser shall fail to pay any instalment of purchase money on due date or shall fail to comply with any of the above terms and conditions, the Vendor may forthwith terminate the Purchaser's licence to occupy the said Apartment and the Purchaser shall thereupon vacate the same and deliver vacant possession thereof to the Vendor.

5. The sale and purchase shall be completed at the offices of Messrs. F. Zimmern & Co. of 402 Holland House, 9 Ice House Street, Hong Kong on payment of the last instalment of the purchase price or, in the event of the Vendor exercising its right under Clause 2(c) hereof to require earlier completion, within 14 days from the date of a notice given by the Vendor or its solicitors to the Purchaser stating that the occupation permit has been issued and requiring the Purchaser to complete. On completion the Vendor and all other necessary parties shall execute a proper assignment of the said undivided shares of and in the said land and buildings together with the exclusive right to hold use occupy and enjoy the said Apartment in favour of the Purchaser subject as hereinafter appearing but otherwise free from incumbrances. 10

6. If the Purchaser shall make and insist on any objection or requisition either as to title conveyance or any matter appearing on the title deeds or otherwise which the Vendor shall be unable or (on the ground of difficulty delay or on any other reasonable ground) unwilling to remove or comply with or if the title of the Vendor shall be defective the Vendor shall, notwithstanding any previous negotiation or litigation, be at liberty to annul the sale in which case the Purchaser shall be entitled to the return of the amounts so paid as aforesaid but without interest costs or compensation. 20

7. Should the Purchaser fail to observe or comply with any of the terms and conditions herein contained and on the Purchaser's part to be observed and performed all amounts paid hereunder whether as deposit or as instalments of purchase money shall be absolutely forfeited to the Vendor who may (without tendering any Assignment to the Purchaser) rescind the sale and at its option retain or resell the said undivided shares of and in the said land and buildings together with the exclusive right to hold use occupy and enjoy the said Apartment, either by public auction or private contract, subject to any stipulations the Vendor may think fit and, in the case of any such sale, any deficiency between the purchase price payable hereunder and the total of the net amount realised by such sale after deducting all expenses and the amounts forfeited to the Vendor as aforesaid shall be recoverable by the Vendor from the Purchaser as and for liquidated damages. Any surplus over and above the purchase price shall belong to the Vendor PROVIDED that the Vendor shall give at least 14 days' notice in writing to the Purchaser at his last known address giving him an opportunity to rectify such non-observance or non-compliance before exercising the power of forfeiture hereunder. On the exercise of the Vendor's right of rescission hereunder, if the Purchaser shall have entered into possession of the said Apartment pursuant to Clause 4 hereof, he shall immediately vacate the same. 30 40

8. In particular, but without in any way limiting the foregoing provisions of Clause 7, IT IS HEREBY EXPRESSLY AGREED AND DECLARED that the Vendor's right of rescission and all other provisions of that Clause shall be exercisable by the Vendor if the Purchaser fails to complete the purchase within 14 days of written notice requiring him so to do notwithstanding that all instalments of purchase money and interest may have been paid to the date of such failure.

9.A. The said undivided shares of and in the said land and buildings and the exclusive right to hold use occupy and enjoy the said Apartment are sold:—

- (1) For all the residue of the term of 75 years with a right of renewal for a further term of 75 years created by the said Conditions of Exchange No. 9303 as modified or varied by a Letter of Modification dated the 20th day of February 1971 (hereinafter collectively called "the said Conditions") and subject to the payment of a due proportion of the rent and to the observance and performance of the lessee's covenants and conditions therein reserved and contained. 10
- (2) Except and reserved unto the Vendor and its assigns and all persons authorised by it or them:—
 - (a) the exclusive right to hold use occupy and enjoy:—
 - (i) all the remaining apartments in the said building other than the Apartment hereby agreed to be sold to the Purchaser.
 - (ii) all the car parking spaces situate in the said building and more particularly depicted on the plan hereto annexed and thereon respectively marked as "Plan No. 1 Parking Deck D" "Plan No. 2 Parking Deck C" "Plan No. 3 Parking Deck B" "Plan No. 4 Parking Deck A." 20
 - (iii) the main roofs and flat roofs of the said building.
 - (iv) all those portions of the said piece or parcel of ground coloured green hatched black on the said Block Plan.
 - (b) The exclusive right, during such time and from time to time as the Vendor shall be the owner of any one or more undivided shares in the said land and building, to alter, decorate, redecorate, reconstruct or cover the entrance lobbies, passages, staircases landings, rights of way and all other parts of the said land and building not intended for common use the same for all lawful purposes (but so that the Purchaser has free access to and from the said Apartment) and the exclusive right to use the external and internal walls, corridors, entrances, landings and spaces alongside the staircases for decoration, lights, lanterns notices and other display material as the Vendor may think fit PROVIDED that the rights hereby reserved shall not impose any obligation on the Vendor and that the cost of normal maintenance and repair of the above parts of the said building shall (except in respect of any damage caused by the Vendor in exercising its rights hereunder), be part of the management expenses of the said land and building payable out of the Service Charges referred to in Clause 16 hereof. 30 40

- (c) The right for the Vendor and its assigns and all persons authorised by the Vendor in common with the Purchaser and all persons having the like right to go pass and repass over and along the access road built on the premises hereby agreed to be sold which is more particularly shown on the said Block Plan hereto annexed and thereon coloured Brown.
- (3) Subject to the free and uninterrupted passage and running of water, sewage, gas and electricity from and to the said land and other portions of the said building through the sewers, drains, watercourses, cables, pipes and wires in under or passing through the said Apartment.
- (4) Together with the right to subjacent and lateral support and shelter from other portions of the said building and subject to such rights for such other portions. 10
- (5) Subject to all easements rights of way (if any) and other rights to which the said land is now subject and with the benefit of all easements rights privileges and appurtenances held or enjoyed therewith.
- (6) Subject to the following covenants to be included in the Assignment to the Purchaser, namely:—
- (a) Not to use or permit the said Apartment to be used other than for domestic purposes.
- (b) Not to commit or suffer to be committed in the said Apartment anything which shall be a nuisance or annoyance to the Vendor or to the owners or occupiers of any neighbouring premises. 20
- (c) Not to use or permit or suffer the said Apartment to be used for illegal or immoral purposes.
- (d) Not to erect, put up or project any permanent or temporary structure or object outside the said Apartment building in any way change the appearance or damage the exterior decoration of the said buildings.
- (e) Not to conduct religious or political meetings or meetings of any kind on the said Apartment.

9.B. The said portion of the said piece or parcel of ground coloured green hatched Black on the said block plan are reserved by the Vendor for its exclusive use as aforesaid is intended to be used by the Vendor and such other person or persons (irrespective of whether they are owners of the said land and the said buildings) as the Vendor shall from time to time authorise and the cost of normal maintenance and repair thereof shall be part of the Management expenses of the said land the said buildings payable out of the service charges referred to in Clause 16 hereof. 30

10. The Vendor shall show a good title to the said undivided shares and the said Apartments at its own expense and shall make and furnish the said Apartments at its own expense and shall make and furnish to the Purchaser at the Purchaser's expenses such attested or other copies of any deeds or documents of title wills and matters of

public records as may be necessary to complete such title.

11. (a) The costs of and incidental to the preparation, completion and registration of this Agreement including the stamp duty thereon shall be borne by the Purchaser and shall be paid on the signing hereof.
- (b) All costs charges and expenses for and incidental to the preparing and execution of the subsequent assignment (including the costs of approval thereof by Messrs. F. Zimmern & Co. on behalf of the Vendor at half the scale fee if the Purchaser shall employ a separate solicitor) and all other relevant deeds and documents, and the making of the plans and the inspection, examination, making and production of abstracts of documents, muniments of title, office, attested and other copies of extracts from records, registers, deeds, wills and other documents and of and incidental to the completion of the purchase shall be borne by the Purchaser. The Vendor shall not be required to produce or hand over any deeds other than those in its possession relating exclusively to the Apartment hereby agreed to be sold. 10
12. Time shall in every respect be of the essence of this Contract.
13. All ad valorem and excess stamp duty (if any) payable on the Assignment shall be borne and paid by the Purchaser.
14. The Assignment pursuant hereto shall be in the form commonly used or adopted by Messrs F. Zimmern & Co. relating to flatted development with such variation (if any) as the circumstances shall require. 20
15. (a) The said undivided shares of and in the said land and buildings and the said exclusive right to hold use occupy and enjoy the said Apartment are sold and will be assigned subject to and with the benefit of the terms and conditions contained in a Deed of Mutual Covenant the said Deed of Mutual Covenant shall be prepared by Messrs. F. Zimmern & Co. and shall be in a form commonly adopted by F. Zimmern & Co. in respect of flatted developments and shall provide for the management of the said land and buildings and of defining the respective rights interest and obligations of the Vendor, the Purchaser and all other owners for the time being of undivided shares therein. 30
- (b) On completion the Purchaser shall, at the option of the Vendor, either enter into the Deed of Mutual Covenant in the said form with such amendments as aforesaid or take his assignment expressly subject thereto.
- (c) The Purchaser shall pay the sum of \$150.00 for the costs of preparation and completion of the said Deed of Mutual Covenant and the furnishing of an attested copy thereof to the Purchaser plus \$4.00 in respect of stamp duties and registration fees thereon.
16. The said Deed of Mutual Covenant shall contain the following provision:— 40

- (a) The management, operation, servicing, maintenance and repair of the said land and buildings, its services, apparatus and equipment including the insurance of the public areas and lifts, the maintenance and operation of the lifts, the water pump for the general service of the said buildings, the lighting and cleaning of the entrances, staircases, landing, passage ways and other areas in common use or intended for common use and the collection and disposal of garbage will be undertaken by the Vendor or some other appointee of the Vendor (hereinafter called "the Management Company") for the term of twelve years from the date of issue of the occupation permit for the said building. 10
- (b) The owner of each Apartment shall pay to the Management Company a monthly service charge of \$70.00 per calendar month for such Apartment commencing at the expiration of three months from the date of issue of the occupation permit for the said buildings subject to increase as hereinafter mentioned, together with a due proportion of all other expenses not covered by such monthly charge.
- (c) When circumstances require, the Management Company shall be entitled on notice to the co-owners of undivided shares in the said land and buildings to increase the monthly service charge to cover any increase in the cost of performing its duties under the said Deed of Mutual Covenant. 20
- (d) The owner of each apartment shall be personally liable for payment of the monthly service charge whether or not his apartment has been let or leased to a tenant or is occupied by the owner himself or by any other person. In default of payment of the monthly service charge, the Management Company may, in addition to any other remedies which may be exercisable under the Deed of Mutual Covenant, immediately suspend rendering its services to the owner and occupiers of the apartment in respect of which default is made and commence proceedings against the defaulting owner for the recovery of the service charge not so paid.
- (e) The owner of each apartment shall before being let into possession thereof, deposit with the Management Company the sum of \$300.00 in respect of such apartment as a standing deposit by way of security for payment of the said monthly service charge. Such deposit shall not be refundable to the owner on his ceasing to be the owner of the apartment in respect of which the deposit was made but the deposit may be transferred into the name of the new owner of such apartment. 30
- (f) The apartments contained the first to the Twelfth floors inclusive of the said buildings shall be used for domestic purposes only.
17. Notwithstanding anything hereinbefore contained, the Vendor shall have the right to make such alterations to the said plans as may be approved by the Public Works Department but shall notify the Purchaser as soon as possible after the approval of any amendment which affects the said Apartment. If as a result of any such amendment the area of the said Apartment shall be altered, then provided the area according to such amended plans shall be at least 98% of the area thereof according to the 40

Supreme Court of Hong Kong

No. referred to in the agreed bundle 35

Agreement for sale Chinachem Investment Company Limited to Wong Lai Ying (1st Plaintiff in H.C. 2739/75) 20/3/71 (Contd.)

present plans, the Purchaser shall accept the same and complete the purchase and shall not be entitled to any compensation or reduction of price in respect thereof; but if the area of the said Apartment according to such amended plans shall be less than 98% of the area thereof according to the present plans the Purchaser shall have the option, either to accept the same and complete the purchase, or to cancel this Agreement, in which event, all instalments of purchase money which have been paid shall be returned to him, but without interest or compensation, Provided that such option shall be exercised in writing within thirty days from the date of the Purchaser being notified by the Vendor of the approval of such amended plans by the Public Works Department and if not exercised within such time the Purchaser shall be deemed to have accepted such plans and shall complete the purchase accordingly.

10

18. The Vendor hereby expressly reserves the right to adjust the total number of undivided shares of and in the said land and buildings the fraction which each share bears to the whole and the allocation thereof to the premises in the said buildings Provided that the same number of shares shall be allocated to each of the apartments and that such adjustment shall not affect the Purchaser's exclusive right to hold, use occupy and enjoy the said Apartment nor alter the size, area or structure thereof.

19. The Vendor shall pay and discharge all Government drainage and road charges and all other charges payable to Government in respect of the construction and completion of the said building before completion.

20

20. It is hereby further agreed that in the event of the Apartment or any part thereof being requisitioned by the Government of Hong Kong or other competent Authority, the Purchaser shall, notwithstanding such requisition, comply with all the terms and conditions herein contained and shall not be entitled to rescind this Agreement by virtue thereof Provided however that, subject to payment by the Purchaser of all moneys payable in accordance herewith, the Purchaser shall be entitled to any compensation payable by the requisitioning Authority in respect of the said Apartment.

21. The Purchaser hereby expressly authorises Messrs. F. Zimmern & Co. to release to the Vendor any part of the purchase money which may be paid to them immediately upon receipt thereof.

30

22. It is further agreed that notwithstanding anything herein contained should any dispute arise between the parties touching or concerning this Agreement or should any unforeseen circumstances beyond the Vendor's control arise whereby the Vendor becomes unable to sell the said undivided shares and Apartment to the Purchaser as hereinbefore provided, the Vendor shall be at liberty to rescind this Agreement forthwith and to refund to the Purchaser all instalments of purchase price paid by the Purchaser hereunder without interest or compensation and upon such rescission and upon repayment of the instalments of purchase price this Agreement shall become null and void as if the same had not been entered into and neither party hereto shall have any claim against the other in respect thereof.

40

23. No error, mis-statement or mis-description shall annul the sale nor shall any compensation be allowed in respect thereof.

24. IT IS HEREBY DECLARED that in this Agreement (if the context so permits

Supreme Court of Hong Kong
No. referred to in the agreed bundle 35
Agreement for sale
Chinachem Investment Company Limited
to Wong Lai Ying (1st Plaintiff in H.C. 2739/75)
20/3/71
(Contd.)

or requires) words importing the singular number only shall include the plural number and vice versa; words importing the masculine gender only shall include the feminine gender and neuter gender; words importing persons shall include corporations.

25. Notwithstanding anything to the contrary herein contained, the Vendor will not erect or permit to be erected any structures on the said portion of the said piece or parcel of ground coloured green hatched black on the said Block Plan reserved for its exclusive use in excess of thirty five feet (35') in height from the road surface of Babington Path.

AS WITNESS whereof the parties hereto have hereunto set their hands the day and year first above written.

10

**THE SCHEDULE ABOVE REFERRED TO
TERMS OF PAYMENT OF THE PURCHASE PRICE**

The Purchase price shall be \$112,875.00 which shall be paid by the purchaser to the Vendor in the manner following:—

Upon signing this Agreement the Purchaser shall pay to the Vendor the sum of \$112,875.00 as deposit and in full payment of the purchase price.

Supreme Court of Hong Kong

SIGNED by T. H. WANG and D. S. WANG for and on behalf of the Vendor in the presence of:—

}

No. referred to in the agreed bundle 35

Agreement for sale

Chinachem Investment Company Limited to Wong Lai

Ying (1st Plaintiff in H.C. 2739/75) 20/3/71 (Contd.)

Solicitors, Hong Kong.

SIGNED by the Purchaser in the presence of:—

}

Solicitors, Hong Kong.

INTERPRETED to the Purchaser in the Chinese language by:—

}

Clerk to Messrs. Ford, Kwan & Co., Solicitors & Notaries, Hong Kong.

RECEIVED the above-mentioned sum of DOLLARS ONE HUNDRED AND TWELVE THOUSAND EIGHT HUNDRED AND SEVENTY FIVE being the deposit money and in full payment of the purchase price.

}

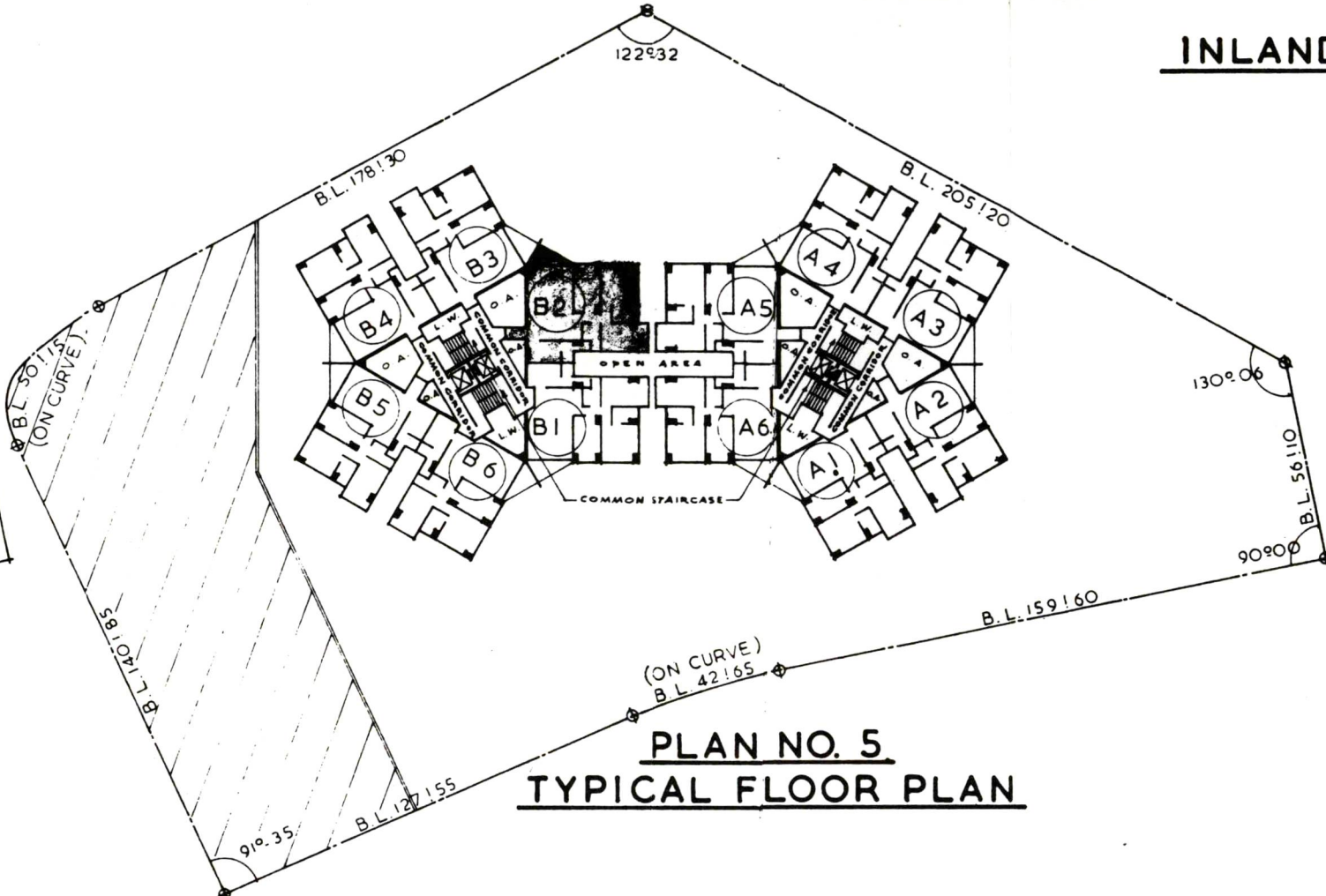
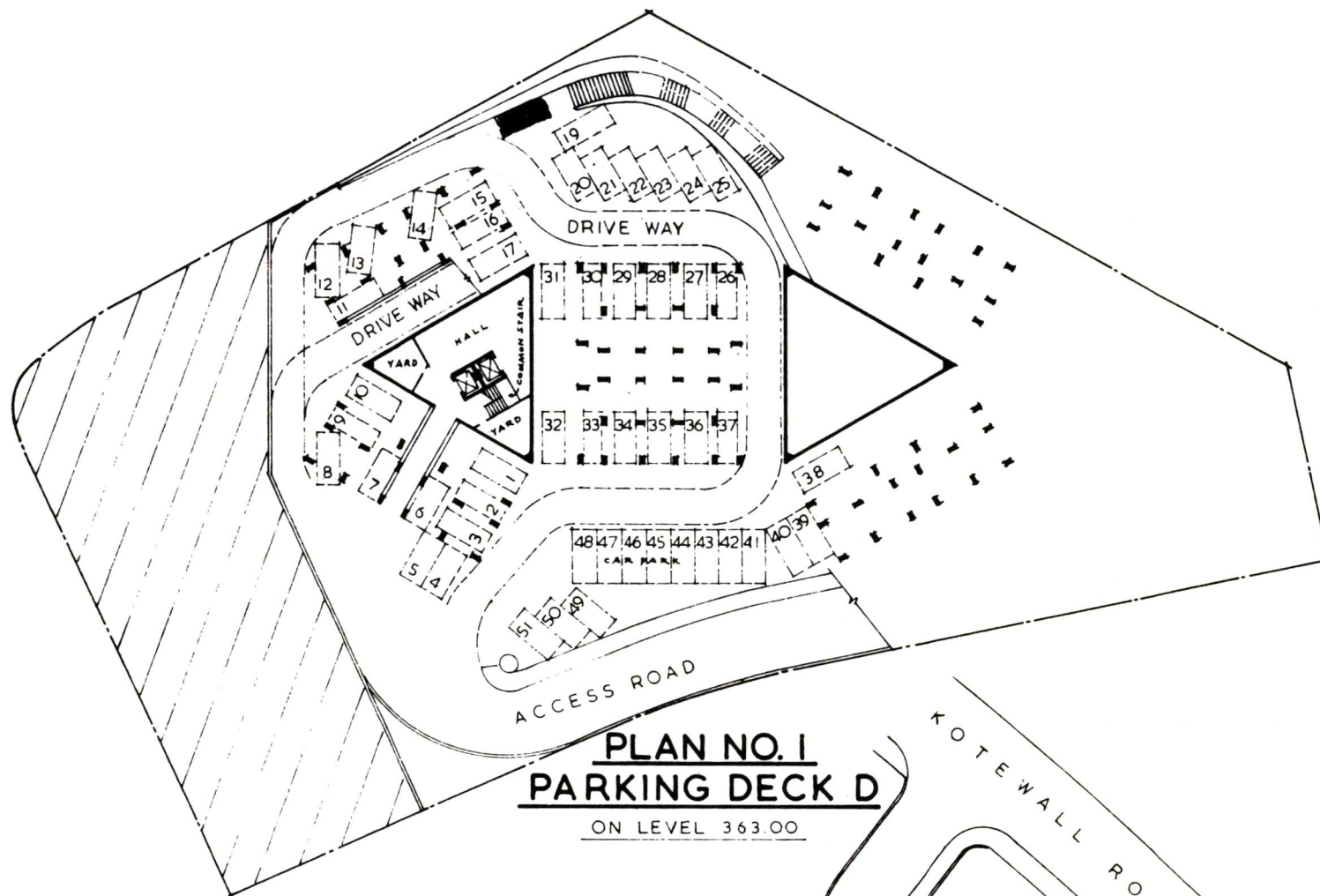
\$112,875.00

WITNESS:—

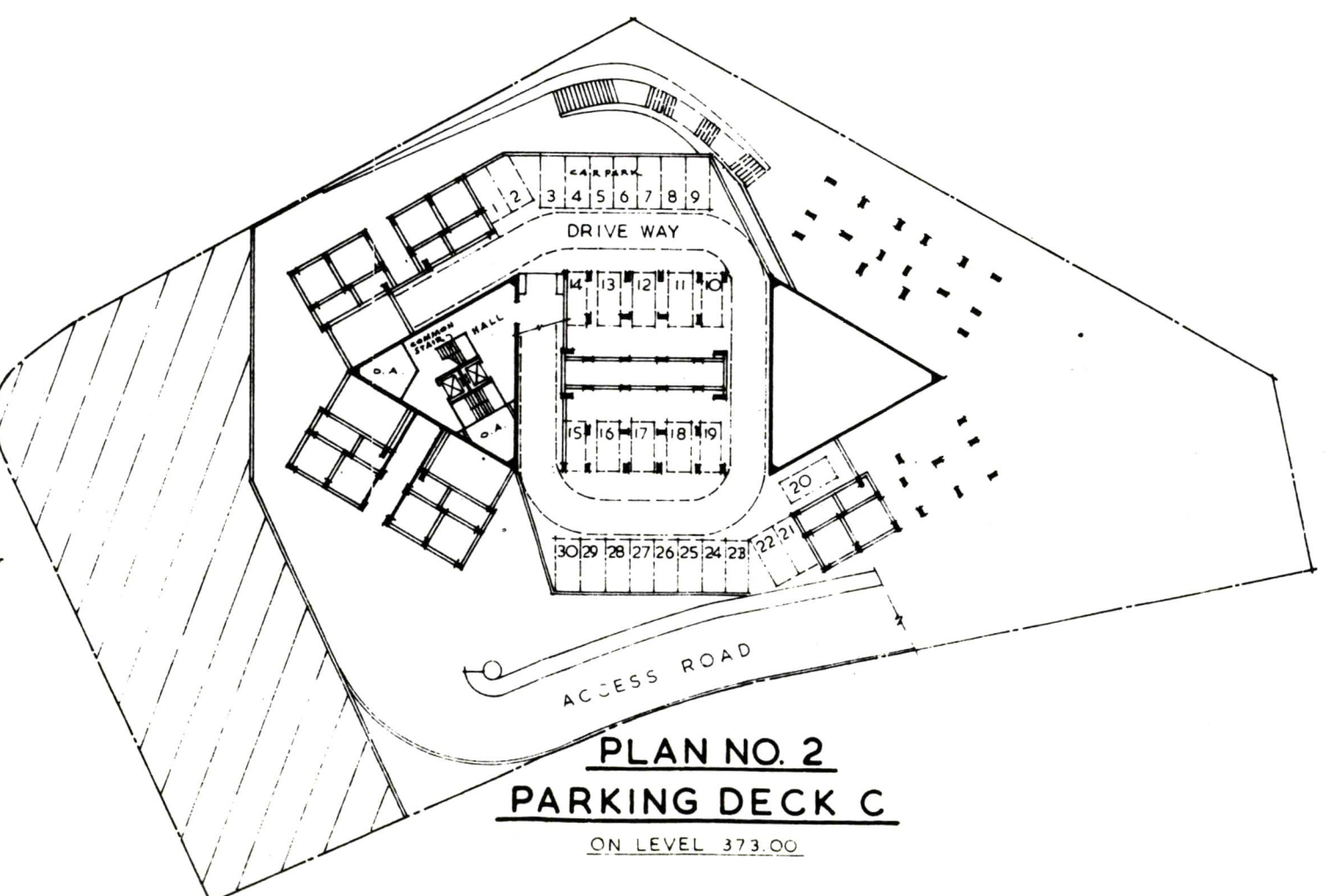
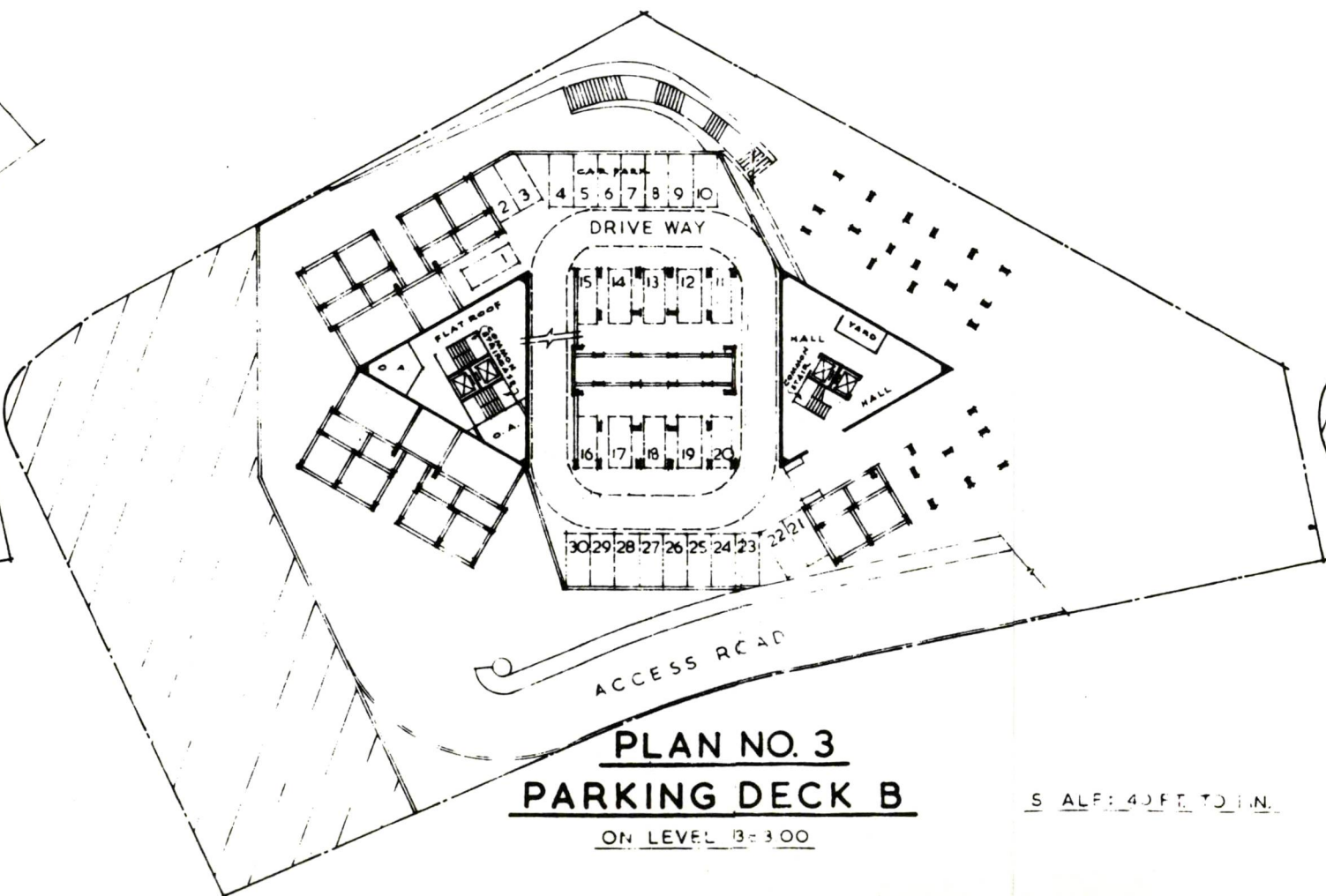
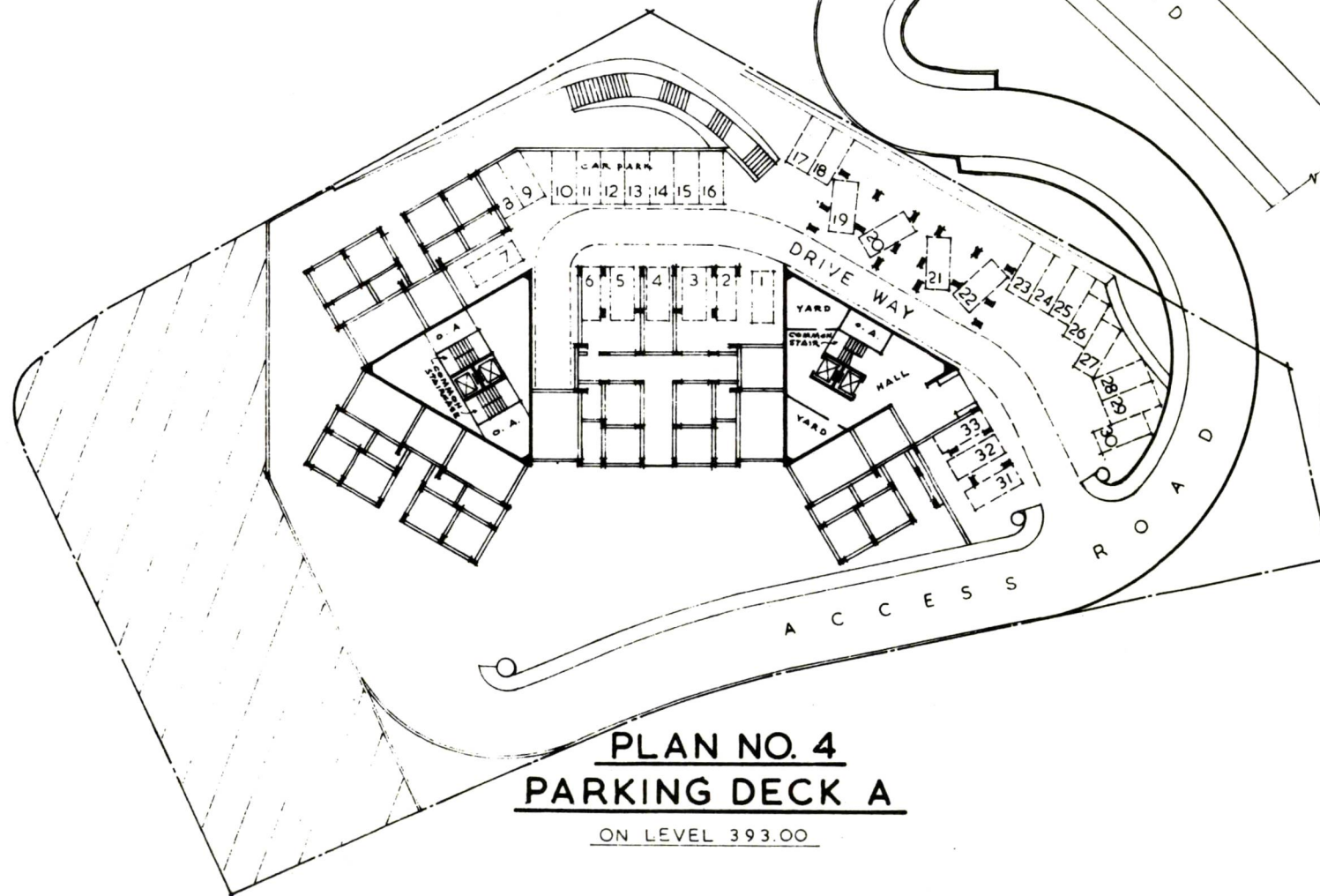
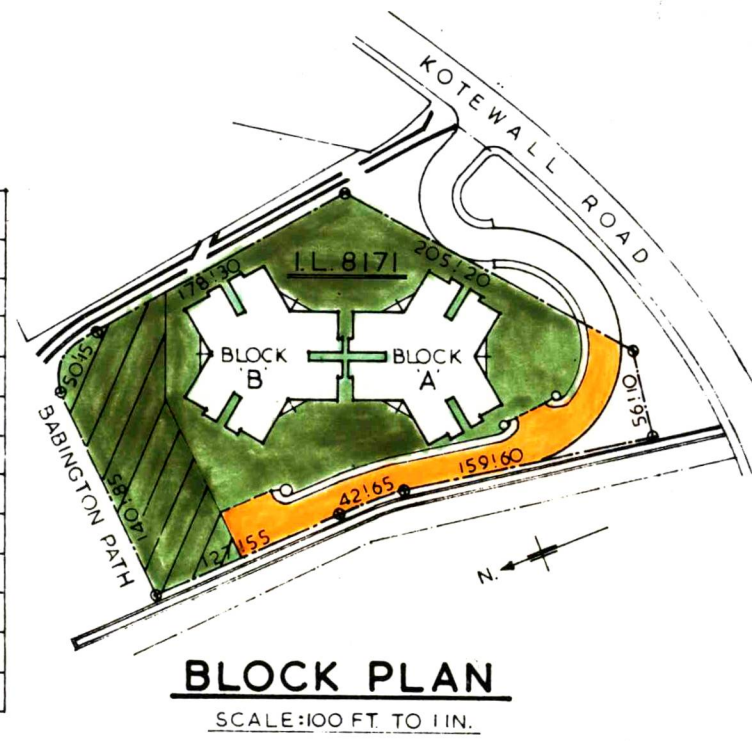
10

20

INLAND LOT NO. 8171



APART. FL.	B1	B2	B3	B4	B5	B6	A1	A2	A3	A4	A5	A6
12 TH												
11 TH												
10 TH												
9 TH												
8 TH												
7 TH												
6 TH												
5 TH												
4 TH												
3 RD												
2 ND												
1 ST												



SCALE: 40 FT. TO 1 IN.

University Height Babington Path — Kotewall Rd., Inland Lot No. 8171, Hong Kong.

Price List 15th February 1971

Block	Floor	Area	Price	Pay in full in one payment at 15% discount	loan payment
A1	1/F	1,045 ft.	153,000	130,100	81,000
	2/F	1,045 ft.	154,000	130,900	81,000
	3/F	1,045 ft.	155,000	131,800	82,000
	4/F	1,045 ft.	156,000	132,600	82,000
	5/F	1,045 ft.	157,000	133,500	83,000
	6/F	1,045 ft.	158,000	134,300	83,000
	7/F	1,045 ft.	159,000	135,200	84,000
	8/F	1,045 ft.	160,000	136,000	84,000
	9/F	1,045 ft.	161,000	136,900	85,000
	10/F	1,045 ft.	162,000	137,700	85,000
	11/F	1,045 ft.	163,000	138,600	86,000
	12/F	1,045 ft. plus roof with cover of 79 ft.	184,000	156,400	86,000

Block	Floor	Area	Price	Pay in full in one payment at 15% discount	loan payment
A2	1/F	1,070 ft.	147,000	125,000	78,000
	2/F	1,070 ft.	148,000	125,800	78,000
	3/F	1,070 ft.	149,000	126,700	79,000
	4/F	1,070 ft.	150,000	127,500	79,000
	5/F	1,070 ft.	151,000	128,400	80,000
	6/F	1,070 ft.	152,000	129,200	80,000
	7/F	1,070 ft.	153,000	130,100	81,000
	8/F	1,070 ft.	154,000	130,900	81,000
	9/F	1,070 ft.	155,000	131,800	82,000
	10/F	1,070 ft.	156,000	132,600	82,000
	11/F	1,070 ft.	157,000	133,500	83,000
	12/F	1,070 ft. plus roof with cover of 79 ft.	178,000	151,300	83,000

Block	Floor	Area	Price	Pay in full in one payment at 15% discount	loan payment
A3	1/F	1,067 ft.	146,000	124,100	77,000
	2/F	1,067 ft.	147,000	125,000	78,000
	3/F	1,067 ft.	148,000	125,800	78,000
	4/F	1,067 ft.	149,000	126,700	79,000
	5/F	1,067 ft.	150,000	127,500	79,000
	6/F	1,067 ft.	151,000	128,400	80,000
	7/F	1,067 ft.	152,000	129,200	80,000
	8/F	1,067 ft.	153,000	130,100	81,000
	9/F	1,067 ft.	154,000	130,900	81,000
	10/F	1,067 ft.	155,000	131,800	82,000
	11/F	1,067 ft.	156,000	132,600	82,000
	12/F	1,067 ft. plus roof with cover of 74 ft.	177,000	150,500	82,000

Due to complete in March next year, (if) overdue each \$10,000.00 of price (payment) will carry interest of \$120.00 each month.

Block	Floor	Area	Price	Pay in full in one payment at 15% discount	loan payment
A4	1/F	1,067 ft.	144,000	122,400	77,000
	2/F	1,067 ft.	145,000	123,300	77,000
	3/F	1,067 ft.	146,000	124,100	77,000
	4/F	1,067 ft.	147,000	125,000	78,000
	5/F	1,067 ft.	148,000	125,800	78,000
	6/F	1,067 ft.	149,000	126,700	79,000
	7/F	1,067 ft.	150,000	127,500	79,000
	8/F	1,067 ft.	151,000	128,400	80,000
	9/F	1,067 ft.	152,000	129,200	80,000
	10/F	1,067 ft.	153,000	130,100	81,000
	11/F	1,067 ft.	154,000	130,900	81,000
	12/F	1,067 ft. plus roof with cover of 74 ft.	175,000	148,800	81,000

Block	Floor	Area	Price	Pay in full in one payment at 15% discount	loan payment
A5	1/F	1,070 ft.	142,000	120,700	76,000
	2/F	1,070 ft.	143,000	121,600	76,000
	3/F	1,070 ft.	144,000	122,400	77,000
	4/F	1,070 ft.	145,000	123,300	77,000
	5/F	1,070 ft.	146,000	124,100	77,000
	6/F	1,070 ft.	147,000	125,000	78,000
	7/F	1,070 ft.	148,000	125,800	78,000
	8/F	1,070 ft.	149,000	126,700	79,000
	9/F	1,070 ft.	150,000	127,500	79,000
	10/F	1,070 ft.	151,000	128,400	80,000
	11/F	1,070 ft.	152,000	129,200	80,000
	12/F	1,070 ft. plus roof with cover of 79 ft.	173,000	147,100	80,000

Block	Floor	Area	Price	Pay in full in one payment at 15% discount	loan payment
A6	1/F	1,045 ft.	147,000	125,000	78,000
	2/F	1,045 ft.	148,000	125,800	78,000
	3/F	1,045 ft.	149,000	126,700	79,000
	4/F	1,045 ft.	150,000	127,500	79,000
	5/F	1,045 ft.	151,000	128,400	80,000
	6/F	1,045 ft.	152,000	129,200	80,000
	7/F	1,045 ft.	153,000	130,100	81,000
	8/F	1,045 ft.	154,000	130,900	81,000
	9/F	1,045 ft.	155,000	131,800	82,000
	10/F	1,045 ft.	156,000	132,600	82,000
	11/F	1,045 ft.	157,000	133,500	83,000
	12/F	1,045 ft. plus roof with cover of 79 ft.	178,000	151,300	83,000

Instructions for payment:

- (A) 25% discount if payment made in full.
- (B) 15% discount for payment according to progress in construction:
 - (i) Down payment of 15% of price; then payment of 15% after completion of foundation; then 10% after completion of 6/F external structure; then 10% after completion of 12/F external structure; remaining payment in full within 7 days after issue of occupation permit.
 - (ii) If loan payment required, payment of 10% paid within 7 days after issue of occupation permit, remaining payment by loans from banks or loan company.
- (C) If monthly payment required, subsequent payment will be charged with interests during the period from the date of the issue of occupation permit to the date of signing of deeds.
- (D) Parking lot without cover — \$5,500 per unit.
Parking lot with cover — \$8,000 per unit.
- (E) We reserve the right to change the prices of this list without notice.

(CHINACHEM INVESTMENT CO. LTD.)

University Height

Babington Path — Kotewall Rd., Inland Lot No. 8171, Hong Kong.

Price List

15th February 1971

Block	Floor	Area	Price	Pay in full in one payment at 15% discount	loan payment
B1	1/F	1,045 ft.	146,000	124,100	77,000
	2/F	1,045 ft.	147,000	125,000	78,000
	3/F	1,045 ft.	148,000	125,800	78,000
	4/F	1,045 ft.	149,000	126,700	79,000
	5/F	1,045 ft.	150,000	127,500	79,000
	6/F	1,045 ft.	151,000	128,400	80,000
	7/F	1,045 ft.	152,000	129,200	80,000
	8/F	1,045 ft.	153,000	130,100	81,000
	9/F	1,045 ft.	154,000	130,900	81,000
	10/F	1,045 ft.	155,000	131,800	82,000
	11/F	1,045 ft.	156,000	132,600	82,000
	12/F	1,045 ft. plus roof with cover of 79 ft.	177,000	150,500	82,000

Block	Floor	Area	Price	Pay in full in one payment at 15% discount	loan payment
B2	1/F	1,070 ft.	140,000	119,000	75,000
	2/F	1,070 ft.	141,000	119,900	75,000
	3/F	1,070 ft.	142,000	120,700	76,000
	4/F	1,070 ft.	143,000	121,600	76,000
	5/F	1,070 ft.	144,000	122,400	77,000
	6/F	1,070 ft.	145,000	123,300	77,000
	7/F	1,070 ft.	146,000	124,100	77,000
	8/F	1,070 ft.	147,000	125,000	78,000
	9/F	1,070 ft.	148,000	125,800	78,000
	10/F	1,070 ft.	149,000	126,700	79,000
	11/F	1,070 ft.	150,000	127,500	79,000
	12/F	1,070 ft. plus roof with cover of 79 ft.	171,000	145,400	79,000

Block	Floor	Area	Price	Pay in full in one payment at 15% discount	loan payment
B3	1/F	1,067 ft.	147,000	125,000	78,000
	2/F	1,067 ft.	148,000	125,800	78,000
	3/F	1,067 ft.	149,000	126,700	79,000
	4/F	1,067 ft.	150,000	127,500	79,000
	5/F	1,067 ft.	151,000	128,400	80,000
	6/F	1,067 ft.	152,000	129,200	80,000
	7/F	1,067 ft.	153,000	130,100	81,000
	8/F	1,067 ft.	154,000	130,900	81,000
	9/F	1,067 ft.	155,000	131,800	82,000
	10/F	1,067 ft.	156,000	132,600	82,000
	11/F	1,067 ft.	157,000	133,500	83,000
	12/F	1,067 ft. plus roof with cover of 74 ft.	178,000	151,300	83,000

Due to complete in March next year, (if) overdue each \$10,000.00 of price (payment) will carry interest of \$120.00 each month.

Block	Floor	Area	Price	Pay in full in one payment at 15% discount	loan payment
B4	1/F	1,067 ft.	155,000	131,800	82,000
	2/F	1,067 ft.	156,000	132,600	82,000
	3/F	1,067 ft.	157,000	133,500	83,000
	4/F	1,067 ft.	158,000	134,300	83,000
	5/F	1,067 ft.	159,000	135,200	84,000
	6/F	1,067 ft.	160,000	136,000	84,000
	7/F	1,067 ft.	161,000	136,900	85,000
	8/F	1,067 ft.	162,000	137,700	85,000
	9/F	1,067 ft.	163,000	138,600	86,000
	10/F	1,067 ft.	164,000	139,400	86,000
	11/F	1,067 ft.	165,000	140,300	87,000
	12/F	1,067 ft. plus roof with cover of 74 ft.	186,000	158,100	87,000

Block	Floor	Area	Price	Pay in full in one payment at 15% discount	loan payment
B5	1/F	1,070 ft.	157,000	133,500	83,000
	2/F	1,070 ft.	158,000	134,300	83,000
	3/F	1,070 ft.	159,000	135,200	84,000
	4/F	1,070 ft.	160,000	136,000	84,000
	5/F	1,070 ft.	161,000	136,900	85,000
	6/F	1,070 ft.	162,000	137,700	85,000
	7/F	1,070 ft.	163,000	138,600	86,000
	8/F	1,070 ft.	164,000	139,400	86,000
	9/F	1,070 ft.	165,000	140,300	87,000
	10/F	1,070 ft.	166,000	141,100	87,000
	11/F	1,070 ft.	167,000	142,000	88,000
	12/F	1,070 ft. plus roof with cover of 79 ft.	188,000	159,800	88,000

Block	Floor	Area	Price	Pay in full in one payment at 15% discount	loan payment
B6	1/F	1,045 ft.	149,000	126,700	79,000
	2/F	1,045 ft.	150,000	127,500	79,000
	3/F	1,045 ft.	151,000	128,400	80,000
	4/F	1,045 ft.	152,000	129,200	80,000
	5/F	1,045 ft.	153,000	130,100	81,000
	6/F	1,045 ft.	154,000	130,900	81,000
	7/F	1,045 ft.	155,000	131,800	82,000
	8/F	1,045 ft.	156,000	132,600	82,000
	9/F	1,045 ft.	157,000	133,500	83,000
	10/F	1,045 ft.	158,000	134,300	83,000
	11/F	1,045 ft.	159,000	135,200	84,000
	12/F	1,045 ft. plus roof with cover of 79 ft.	180,000	153,000	84,000

Instructions for payment:

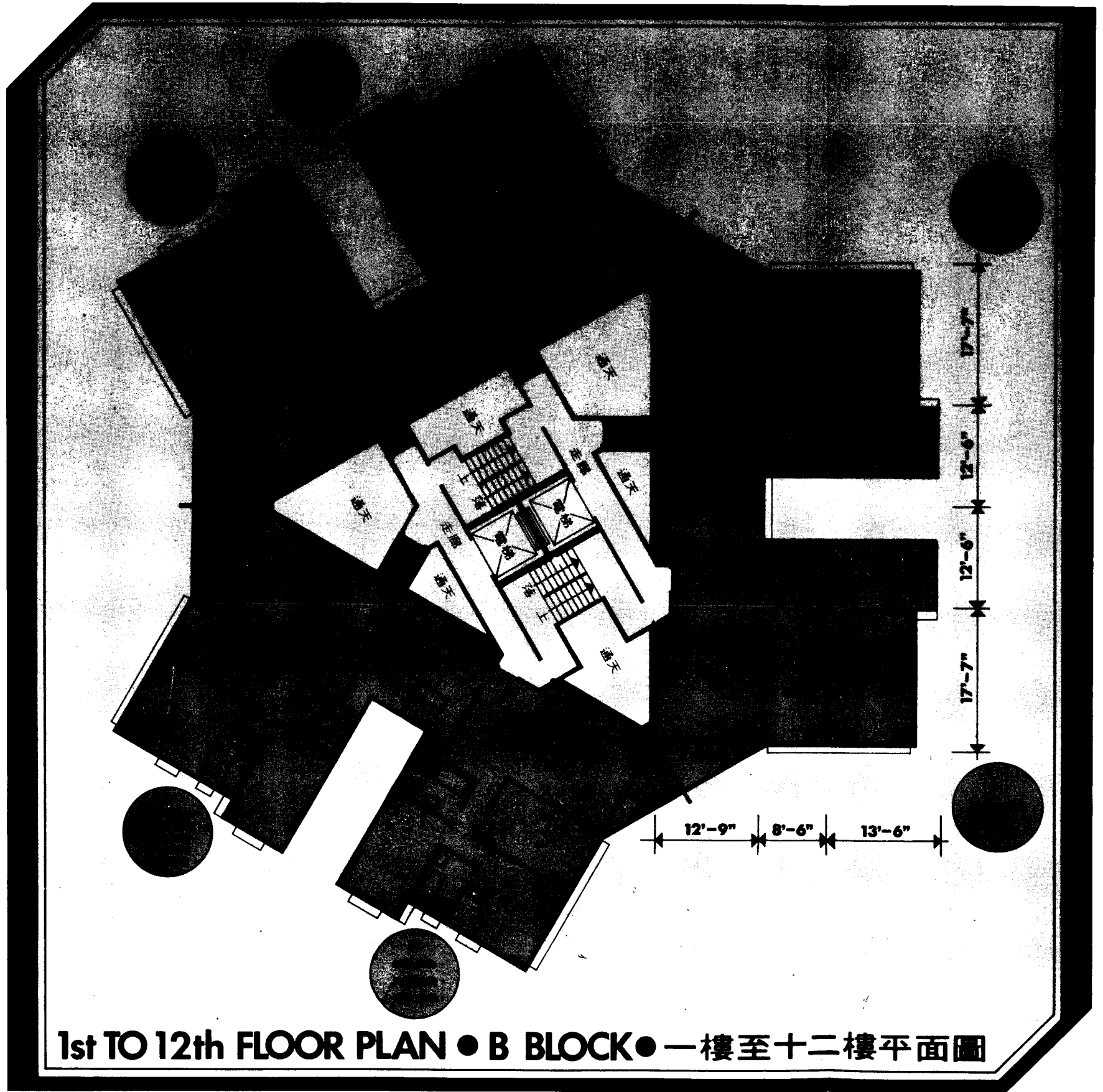
- (A) 25% discount if payment made in full.
- (B) 15% discount for payment according to progress in construction:
 - (i) Down payment of 15% of price; then payment of 15% after completion of foundation; then 10% after completion of 6/F external structure; then 10% after completion of 12/F external structure; remaining payment in full within 7 days after issue of occupation permit.
 - (ii) If loan payment required, payment of 10% paid within 7 days after issue of occupation permit, remaining payment by loans from banks or loan company.
- (C) If monthly payment required, subsequent payment will be charged with interests during the period from the date of the issue of occupation permit to the date of signing of deeds.
- (D) Parking lot without cover — \$5,500 per unit.
Parking lot with cover — \$8,000 per unit.
- (E) We reserve the right to change the prices of this list without notice.

(CHINACHEM INVESTMENT CO. LTD.)

Supreme
Court of
Hong Kong

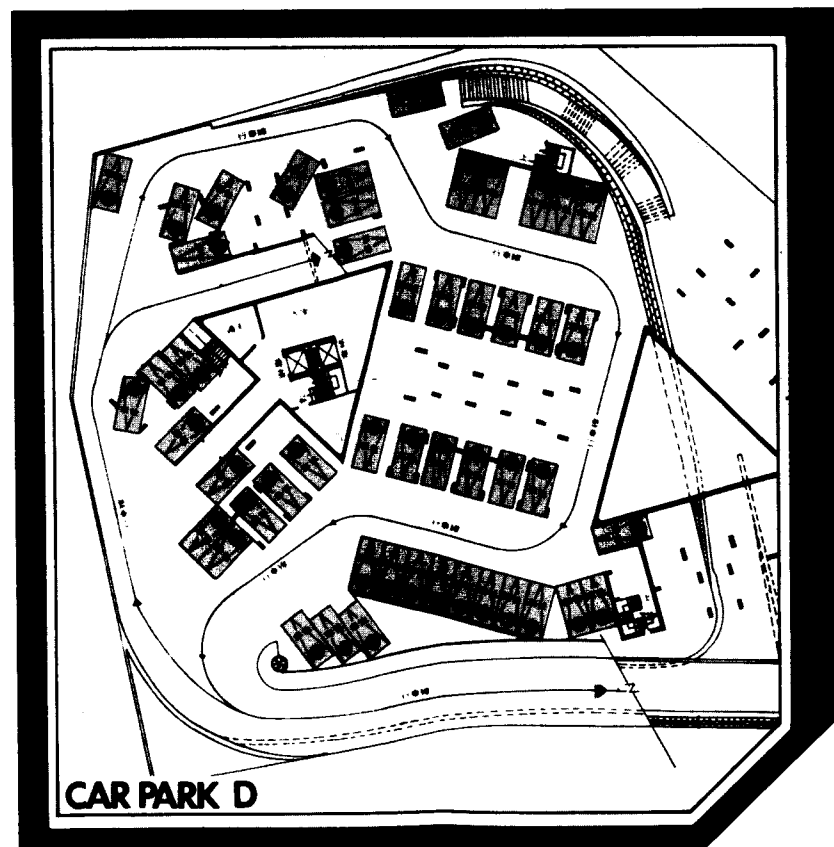
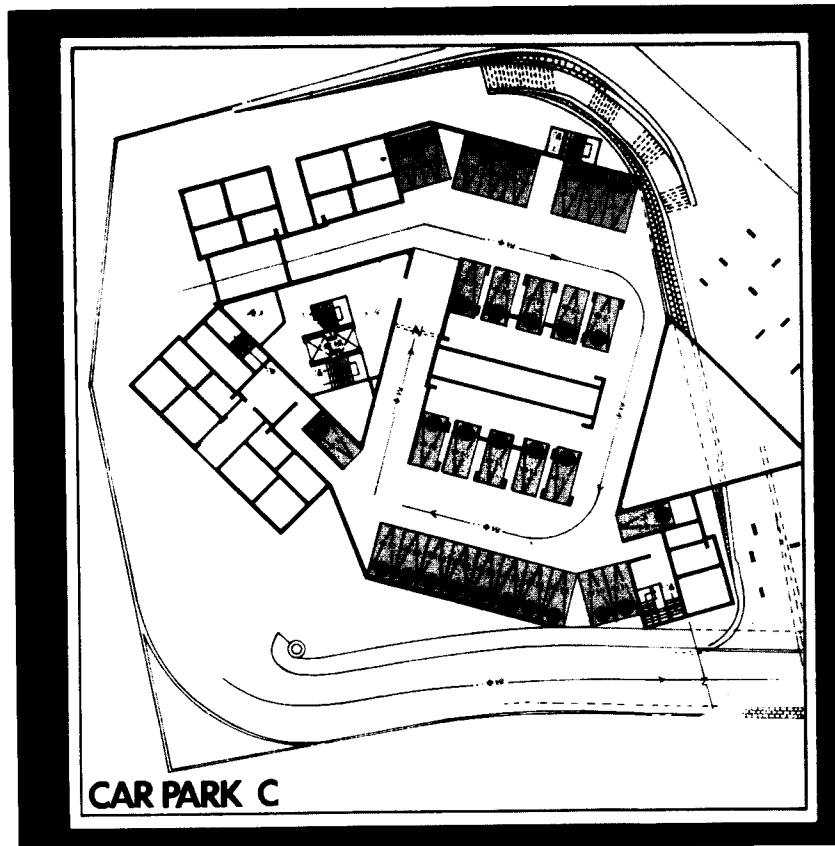
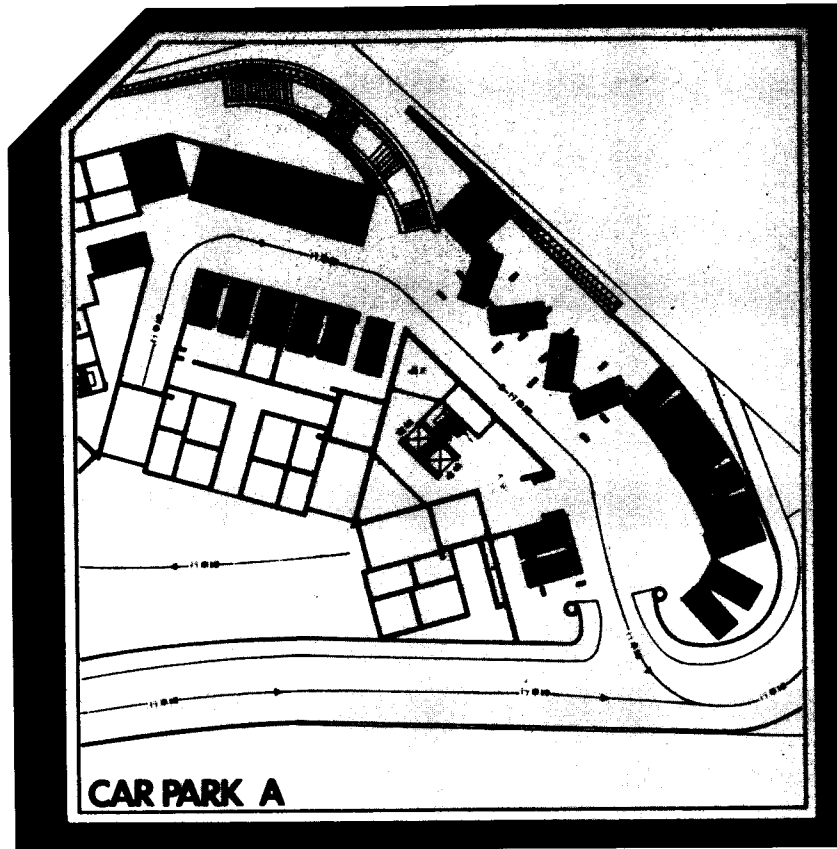
No. referred
to in the
agreed
bundle
243
Brochure
and price
list &
English
translation
7/77







1st TO 12th FLOOR PLAN • A BLOCK • 一樓至十二樓平面圖



All plans are subject to the final approved plans by the building authority.
 詳細訂正圖則以公務局最後批准之圖則為標準。

原有設備

新增最新設備



大學閣

香港半山區巴丙頓道一旭和道 I. L. 8171 地段

價目表 一九七一年二月十五日

座別	層次	面積	售價	八五折特價	貸款額
A1	一樓	1,045呎	153,000	130,100	81,000
	二樓	1,045呎	154,000	130,900	81,000
	三樓	1,045呎	155,000	131,800	82,000
	四樓	1,045呎	156,000	132,600	82,000
	五樓	1,045呎	157,000	133,500	83,000
	六樓	1,045呎	158,000	134,300	83,000
	七樓	1,045呎	159,000	135,200	84,000
	八樓	1,045呎	160,000	136,000	84,000
	九樓	1,045呎	161,000	136,900	85,000
	十樓	售1,045呎	162,000	137,700	85,000
	十一樓	售1,045呎	163,000	138,600	86,000
	十二樓	售1,045呎連天台及有蓋78呎	184,000	156,400	86,000

座別	層次	面積	售價	八五折特價	貸款額
A2	一樓	1,070呎	147,000	125,000	78,000
	二樓	1,070呎	148,000	125,800	78,000
	三樓	1,070呎	149,000	126,700	79,000
	四樓	1,070呎	150,000	127,500	79,000
	五樓	1,070呎	151,000	128,400	80,000
	六樓	1,070呎	152,000	129,200	80,000
	七樓	1,070呎	153,000	130,100	81,000
	八樓	1,070呎	154,000	130,900	81,000
	九樓	1,070呎	155,000	131,800	82,000
	十樓	1,070呎	156,000	132,600	82,000
	十一樓	售1,070呎	157,000	133,500	83,000
	十二樓	售1,070呎連天台及有蓋79呎	178,000	151,300	83,000

座別	層次	面積	售價	八五折特價	貸款額
A3	一樓	1,067	146,000	124,100	77,000
	二樓	1,067呎	147,000	125,000	78,000
	三樓	1,067呎	148,000	125,800	78,000
	四樓	1,067呎	149,000	126,700	79,000
	五樓	1,067呎	150,000	127,500	79,000
	六樓	1,067呎	151,000	128,400	80,000
	七樓	1,067呎	152,000	129,200	80,000
	八樓	1,067呎	153,000	130,100	81,000
	九樓	售1,067呎	154,000	130,900	81,000
	十樓	售1,067呎	155,000	131,800	82,000
	十一樓	售1,067呎	156,000	132,600	82,000
	十二樓	售1,067呎連天台及有蓋74呎	177,000	150,500	82,000

準期明年三月完成，愈期每萬元樓價每月補息一百式拾元

座別	層次	面積	售價	八五折特價	貸款額
A4	一樓	1,067呎	144,000	122,400	77,000
	二樓	1,067呎	145,000	123,300	77,000
	三樓	1,067呎	146,000	124,100	77,000
	四樓	1,067呎	147,000	125,000	78,000
	五樓	1,067呎	148,000	125,800	78,000
	六樓	1,067呎	149,000	126,700	79,000
	七樓	售1,067呎	150,000	127,500	79,000
	八樓	售1,067呎	151,000	128,400	80,000
	九樓	售1,067呎	152,000	129,200	80,000
	十樓	售1,067呎	153,000	130,100	81,000
	十一樓	售1,067呎	154,000	130,900	81,000
	十二樓	售1,067呎連天台及有蓋74呎	175,000	148,800	81,000

座別	層次	面積	售價	八五折特價	貸款額
A5	一樓	1,070呎	142,000	120,700	76,000
	二樓	1,070呎	143,000	121,600	76,000
	三樓	1,070	144,000	122,400	77,000
	四樓	1,070呎	145,000	123,300	77,000
	五樓	1,070呎	146,000	124,100	77,000
	六樓	1,070呎	147,000	125,000	78,000
	七樓	1,070呎	148,000	125,800	78,000
	八樓	1,070呎	149,000	126,700	79,000
	九樓	1,070呎	150,000	127,500	79,000
	十樓	1,070呎	151,000	128,400	80,000
	十一樓	1,070呎	152,000	129,200	80,000
	十二樓	售1,070呎連天台及有蓋79呎	173,000	147,100	80,000

座別	層次	面積	售價	八五折特價	貸款額
A6	一樓	1,045呎	147,000	125,000	78,000
	二樓	1,045呎	148,000	125,800	78,000
	三樓	1,045呎	149,000	126,700	79,000
	四樓	1,045呎	150,000	127,500	79,000
	五樓	1,045呎	151,000	128,400	80,000
	六樓	1,045呎	152,000	129,200	80,000
	七樓	1,045呎	153,000	130,100	81,000
	八樓	1,045呎	154,000	130,900	81,000
	九樓	1,045呎	155,000	131,800	82,000
	十樓	1,045呎	156,000	132,600	82,000
	十一樓	1,045呎	157,000	133,500	83,000
	十二樓	售1,045呎連天台及有蓋79呎	178,000	151,300	83,000

付款辦法：(A) 一次過付款特價七五折優待

(B) 按下列建築程序付款八五折優待

(一) 首期付樓價15%，於地脚完成時付15%，六樓石屎完成時付10%，十二樓石屎完成時付10%，餘款於有入伙紙七天内付清

(二) 如需貸款則於有入伙紙七天内付10%餘款可向貸款公司或銀行申請貸款

(C) 餘款如需分期付款者則自有入伙紙起至簽按契時止另計利息

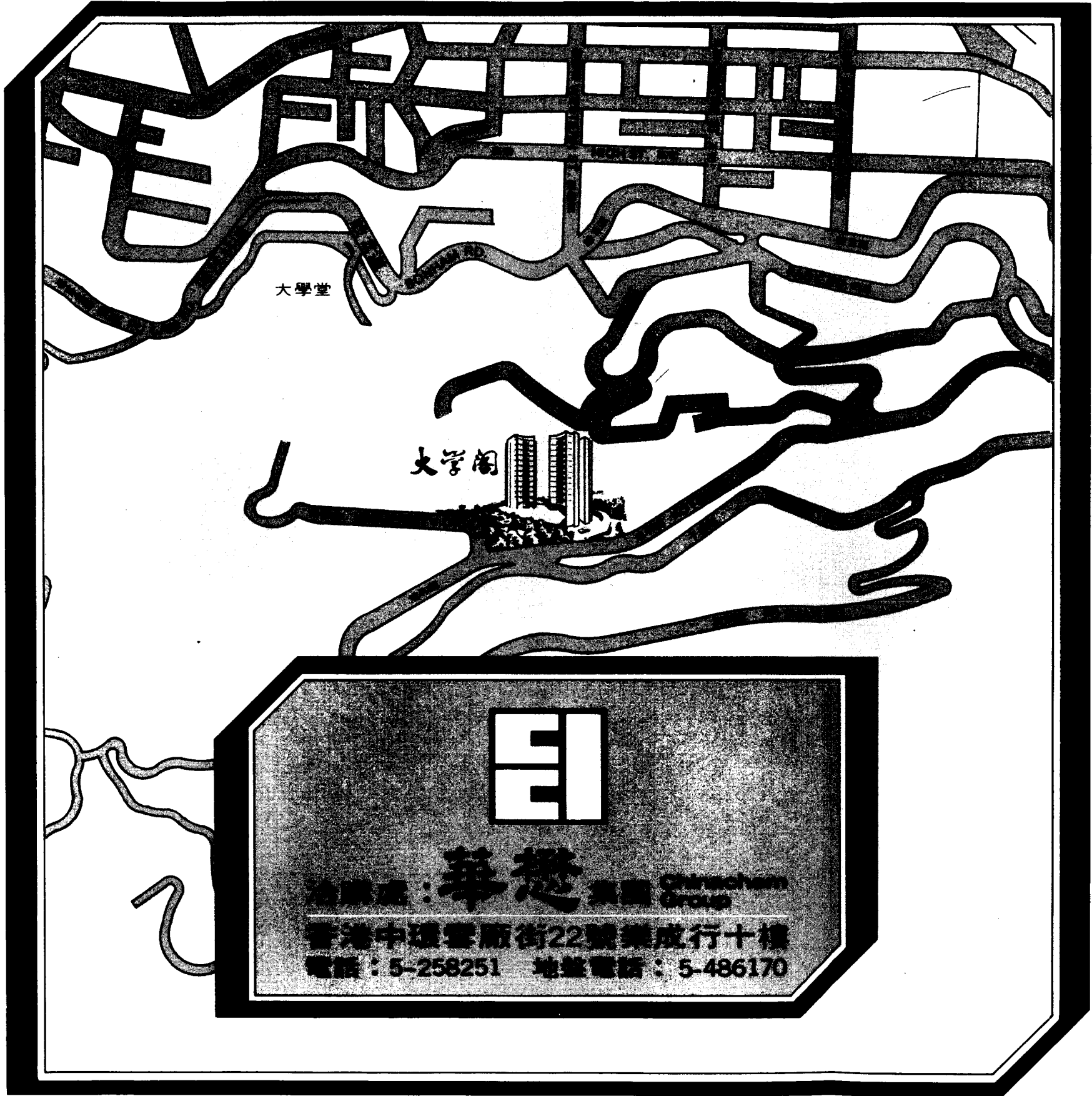
(D) 單位無蓋每個\$5,500 有蓋每個\$8,000

(E) 本價目表隨時調整，不另通知。

華懋置業有限公司

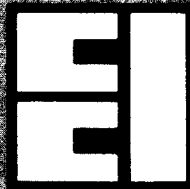
香港中環雪廠街九號三一四室

電話：H-224578 232803 229060



大學堂

大學閣



華懋

Cheung Cheong Group

香港中環雲龍街22號樂成行十樓

電話：5-258251 地鐵電話：5-486170

Supreme
Court of
Hong Kong

UNIVERSITY HEIGHTS
I. L. 8171 Kotewall Road

23rd July 1977.

No. referred
to in the
agreed
bundle
243
Brochure
and price
list &
English
translation
7/77
(Contd.)

BLOCK A							
Floor	Flat A1	Flat A2	Flat A3	Flat A4	Flat A5	Flat A6	
1st	\$460,000	\$443,300	\$438,900	\$464,400	\$450,000	\$444,500	
2nd	464,500	447,800	442,800	467,800	452,800	447,200	
3rd	468,900	452,200	447,200	471,100	455,600	450,000	
4th	473,300	461,100	456,100	475,600	458,300	453,400	
5th	477,800	466,700	462,200	480,000	461,100	456,700	10
6th	482,200	472,200	467,800	484,500	463,900	460,000	
7th	486,700	477,800	473,300	—	468,300	464,400	
8th	—	483,400	478,900	—	472,200	468,900	
9th	495,600	—	—	497,800	476,100	473,300	
10th	—	—	490,000	—	480,500	477,800	
11th	—	—	—	—	485,000	482,200	
12th	—	—	—	565,600 (& Roof)	544,500 (& Roof)	538,900 (& Roof)	

BLOCK B							
Floor	Flat B1	Flat B2	Flat B3	Flat B4	Flat B5	Flat B6	
1st	\$445,000	\$454,400	\$460,000	\$472,200	\$477,200	\$450,000	
2nd	447,800	457,200	463,300	476,600	481,700	454,400	
3rd	450,600	460,000	466,700	481,100	486,100	458,900	
4th	453,400	462,800	470,600	485,500	490,500	463,300	
5th	456,700	466,100	474,500	—	—	467,800	
6th	460,000	—	478,900	—	—	472,200	
7th	463,900	—	483,400	498,900	—	476,700	
8th	467,800	476,100	—	503,300	—	481,100	
9th	472,200	480,600	—	—	512,800	485,500	
10th	476,700	485,000	—	—	517,200	490,000	30
11th	—	489,400	—	—	521,700	—	
12th	538,900 (& Roof)	549,400 (& Roof)	558,900 (& Roof)	—	—	—	

\$25,000 for COVERED Car Park

\$20,000 for OPEN Car Park

CHINACHEM GROUP

9th Floor, Baskerville House, No. 22, Ice House Street, Hong Kong.
Telephone: 5-258251-9

(Prices: Subject to change without prior notice.)

華懋集團 香港雪廠街22號 電話：辦事處 5-258251
樂成行拾樓(9)字 電話：地 盆 5-486170 (假日照常)

(註：價目如有調整恕不另行通知)

Original fixture and equipments

- Stainless steel Hitachi brand lifts
- American Kohler bathtubs with surrounds
- American crystal delux watertaps and shower heads
- Imported stainless steel sinks
- Walls in bathroom and kitchen to be tiled with ceramic tiles up to the ceiling
- Petroleum gas via central system-piping to reach every apartment
- 1.2 inch wide zinc-coated steel framed windows
- Teak wood floor-board
- Imported aluminium frame doors

10

To preserve the good outward appearance of this building, it is declared that there should not be erected any brackets for flowers or the enlargement of balcony iron shelves or the dismantling or re-building of any original fixture or the painting of different colours which will affect the original delux outward appearance.

New addition of latest fixture and equipments

- Exterior wall — will be tiled with high class mosaic tiles, good looking and durable.
- Hall — the walls at the entrance, the flooring and corridors on various floors will be tiled up to the ceiling. Each flat unit will have a new style aluminium mail box.
- Corridors — will all be paved with mosaic tiles, clean and good looking.
- Interior wall — The walls in all sitting rooms and rooms will be treated with superior quality plaster and painted with superior quality I.C.I. paint.
- Aluminium windows — Imported aluminium windows will be used in sitting rooms and rooms. The glass panes will be of a well known imported brand which are tinted and heat insulating.
- Bathrooms — will be fitted with American Kohler bath with surrounds and delux sanitary equipment. The floors will be paved with mosaic tiles. The walls will have colour tiles up to the ceiling.
- Kitchen — The floor will be paved with mosaic tiles, the walls will be tiled up to the ceiling and there will be an imported sink.
- Water meters — each floor will have its own water meter. In the kitchen there will be a new type mobile water tap. All the kitchens and bathrooms will have hot and cold water taps built into the wall.
- Gas — each unit will have installed Town Gas piping to reach the gas appliances in the kitchen and bathroom and making the connections easy.
- Doors — the main door will be solid teak with carved decorations and fitted with superior quality imported locks and peep holes.
- Electrical appliances — each floor will have built-in wiring, switches, light-fitting, power points, door bell, telephone wires.
- Fire equipments — all fire fighting equipments are installed in accordance with the Fire Office regulations.
- Roof top — This will be coated with waterproof cement and tarmac and paved with waterproof thick heat-insulated tiles.
- Security — there will be installed in each unit the best anti-theft system, intercom system, electrically operated gates in the hall to protect the safety of the occupiers.
- Aerial — each unit will have plug-in point for the communal aerial.

20

30

40

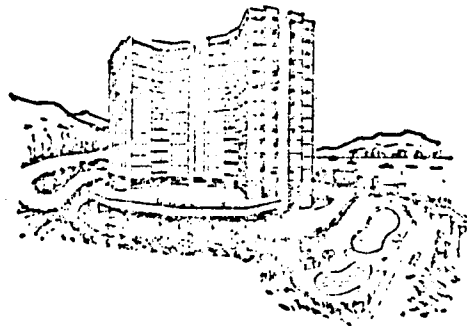
Supreme
Court of
Hong Kong

No. referred
to in the
agreed
bundle
246
Adver-
tisement
from
newspaper
and English
translation

半山旭和道L.L.8171地段

大學閣

150年期



華懋置業有限公司 中環雪廠街九號314室
H232803 H224578

搵山面海 風光如畫
豪華外型 設計獨特
面積1040-1070方呎
停車場四層 私家泳池兩個
付款辦法 全港最佳

定明年三月完成逾期補回月息1.2%

每呎只售九十餘元
建築期間只付四萬餘元
餘款入伙後分十二年付款
平過交租多多

Supreme
Court of
Hong Kong

TRANSLATION OF ADVERTISEMENT (EXH. H)

No. referred
to in the
agreed
bundle
246
Adver-
tise-
ment
from
newspaper
and
English
translation
(Contd.)

Mid-level Kotewall Road I.L. 8171

University Height

150 years term

Occupying the hill(-side) and facing the sea-picturesque scenery delux outward
appearance, special design

Area 1040-1070 sq. ft.

4 storey-car park. Two private swimming pools.

Mode of payment the best in Hong Kong.

Scheduled to complete in March next year.

If time exceeded will pay back monthly interest of 1.2%

Each foot sold for \$90.00 odd

During construction period only pay \$40,000.00 odd.

The balance money after occupation to pay over 12 years.

It is cheaper than paying rent by far.

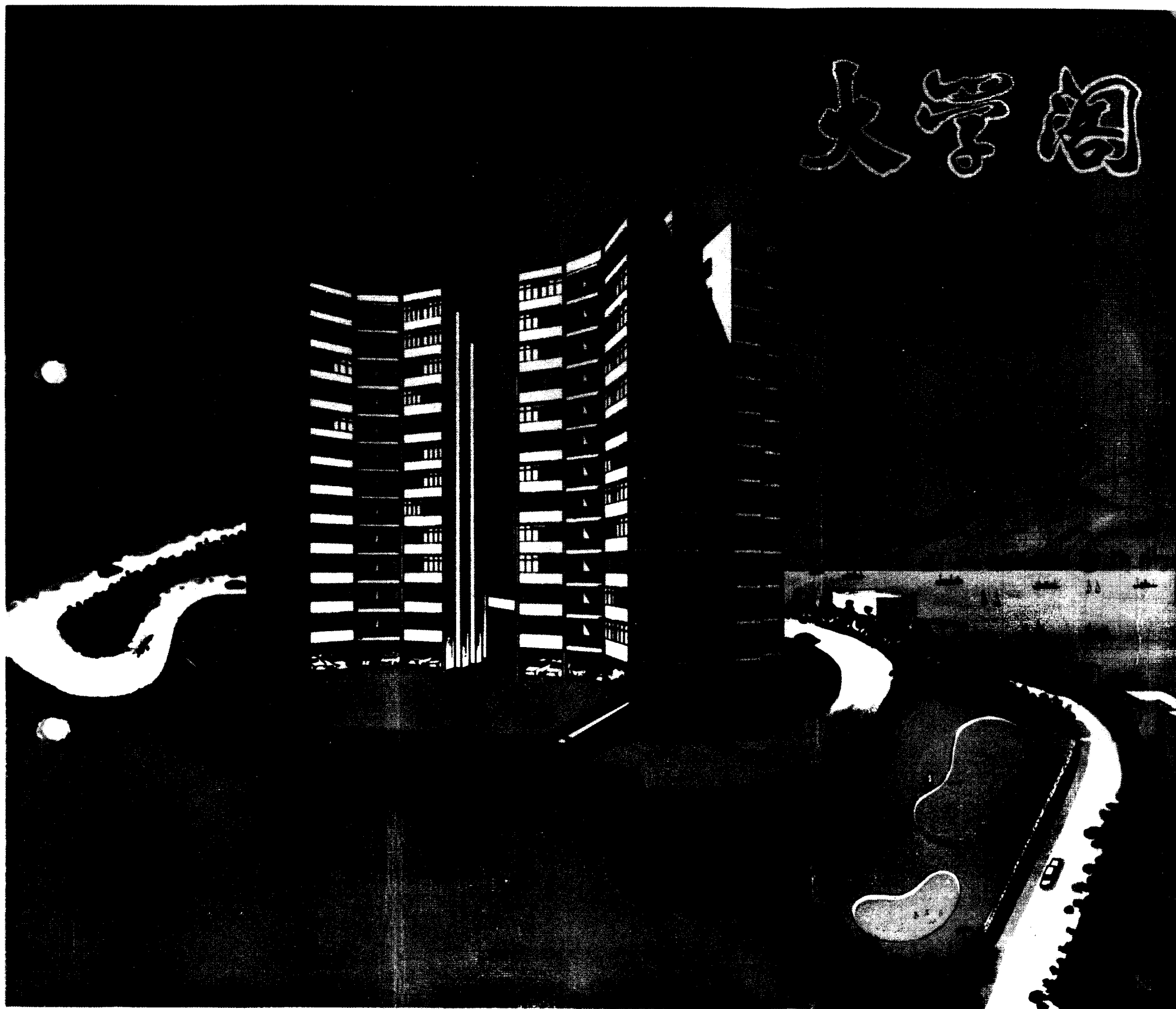
Chinachem Investment Co. Ltd. Room 314, No. 9 Ice House Street, Central

H 232803, H 224578

10

Supreme
Court of
Hong Kong

No. referred
to in the
agreed
bundle
247
Brochure



大學閣

洽購處：**華懋置業有限公司**

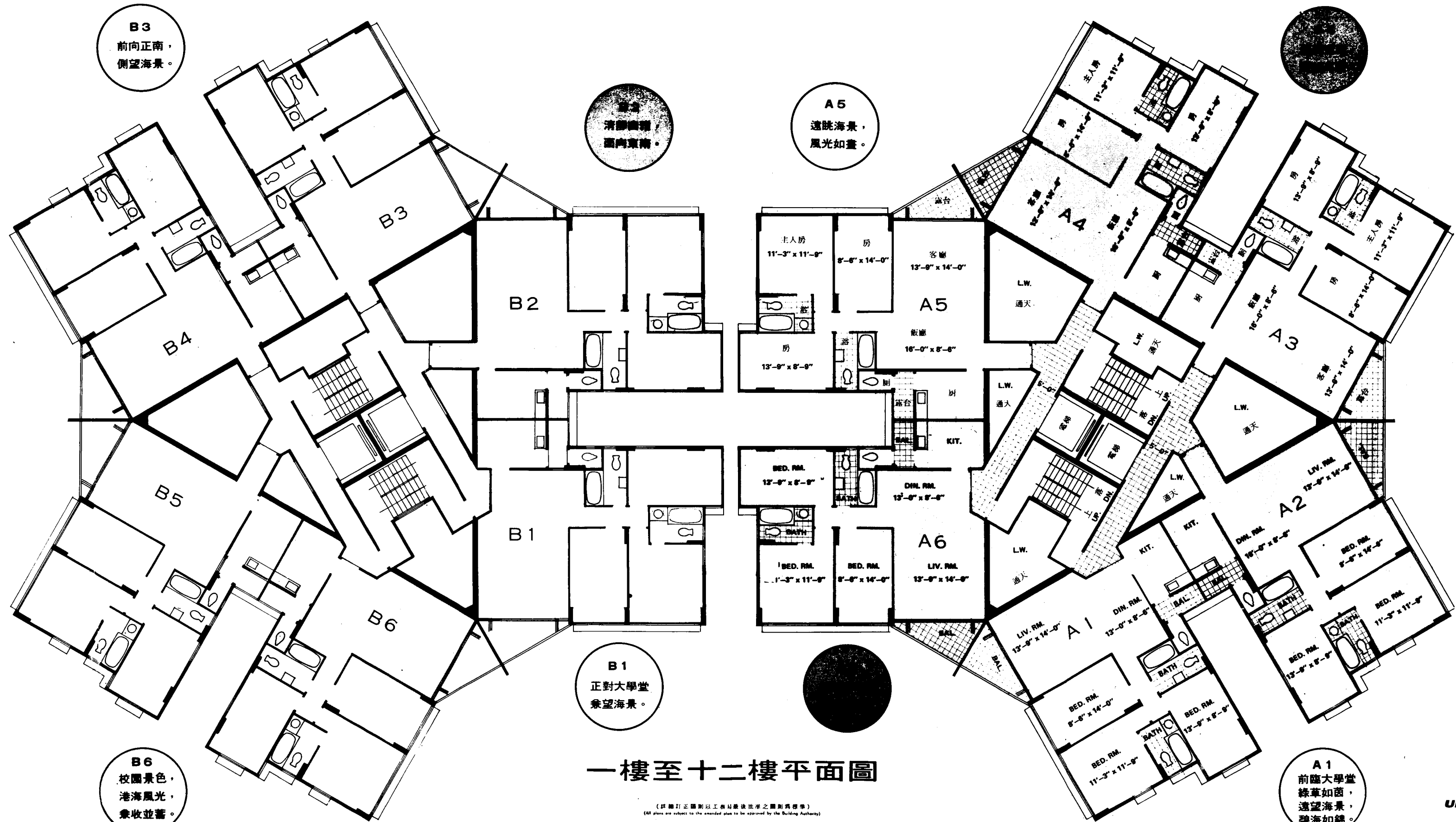
香港中環雪廠街九號314室 電話 H-232803 H-224578

遠眺九龍半島全景



近樹·遠山·帆影·碧波·如詩如畫·一望無際·美不勝收。

近樹·遠山·帆影·碧波·如詩如畫·一望無際·美不勝收。



B3
前向正南·
側望海景。

清靜幽雅
面向東南。

A5
遠眺海景·
風光如畫。

A3
面向正南·
冬暖夏涼。

B1
正對大學堂
兼望海景。

A2
面向正南·
冬暖夏涼。

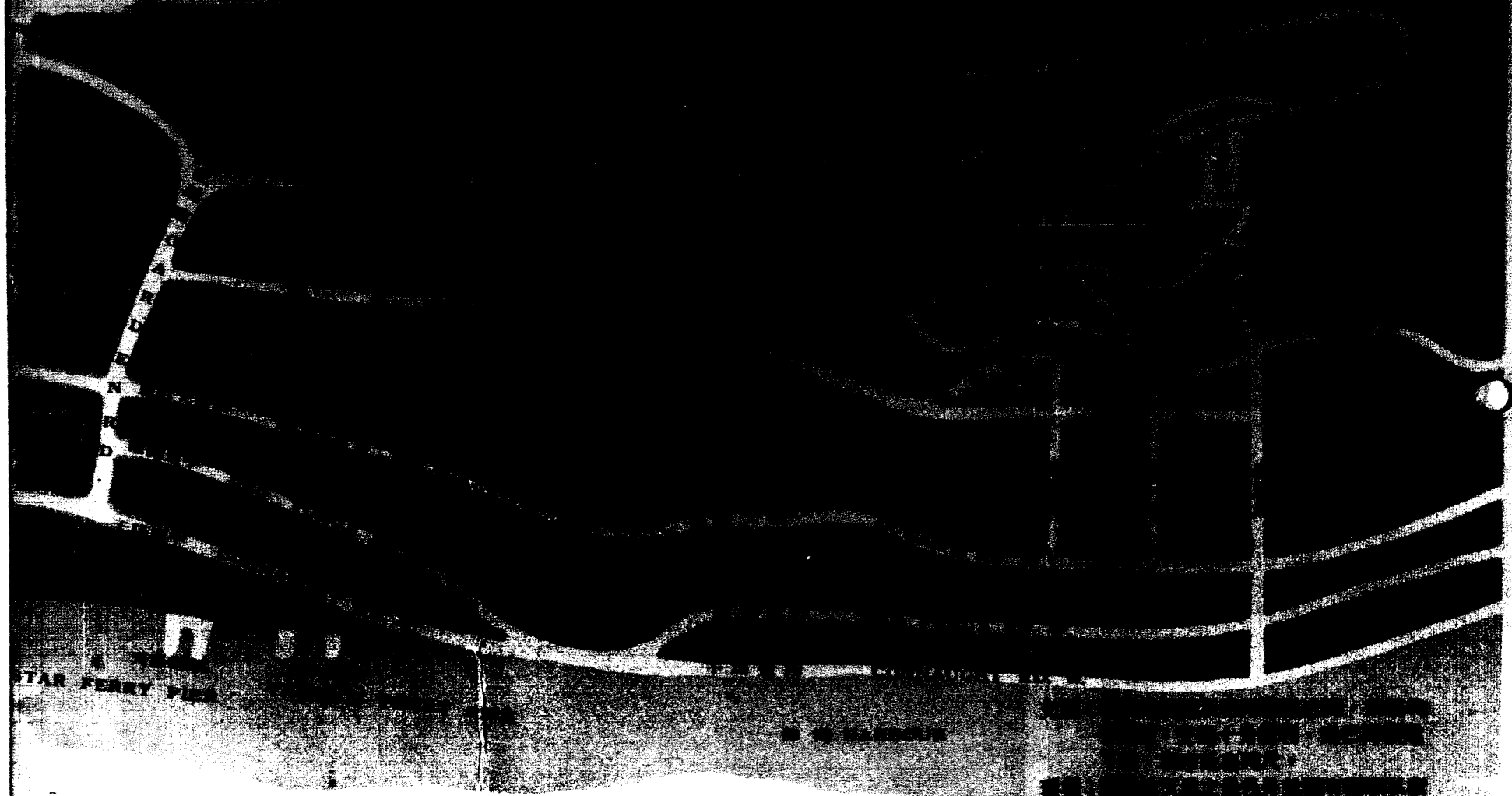
B6
校園景色·
港海風光·
兼收並蓄。

A1
前臨大學堂
綠草如茵·
遠望海景·
碧海如錦。

一樓至十二樓平面圖

(詳細訂正圖則以工務局最後批准之圖則為準)
(All plans are subject to the amended plan to be approved by the Building Authority.)





地盤位置圖 (BLOCK PLAN)

並增進健康。

圖中標記之公署及建築局印 圖號：七〇一四六〇

Supreme Court of Hong Kong

No. referred to in the agreed bundle 59
Copy Building Authority Form 12 (approval of amended plans)
9/10/71

GOVERNMENT OF HONG KONG.

Form 12.

BUILDINGS ORDINANCE.

(Chapter 123).

Section 14.

BUILDING (ADMINISTRATION) REGULATIONS.

Regulation 30(1)(a).

Approval of Plans.

B.O.O. Ref. No. 2/2253/69
To: Mr. Lam Shing Wo,
602 Caroline Mansion,
2 Yuen Ping Road,
Hong Kong.

OFFICE OF THE BUILDING AUTHORITY.

9th October 1971.

The Building (Access Road)

plans attached hereto, on which I have signified my approval, are hereby approved.

(No. and Name of Street) 12 Babington Path & Katerwall Road
on (Lot No./Permit Area No.) 1 L. 9171

2. Your attention is drawn to subsection (2) of section 14 of the Buildings Ordinance, which provides that the giving by the Building Authority of his approval to any plans shall not exempt any person from the necessity of obtaining the consent of the Building Authority to the commencement and carrying out of the Building works shown on such plans. This approval does NOT authorize the commencement or carrying out of any Building works.

Access Road

Min. Chan
pro. Building Authority

Supreme
Court of
Hong Kong

No. referred
to in the
agreed
bundle
244
Building
Authority
Form 14
(Consent)
17/11/71

GOVERNMENT OF HONG KONG.
Form 14.
BUILDINGS ORDINANCE.
(Chapter 123).
Section 14.
BUILDING (ADMINISTRATION) REGULATIONS.
Regulation 32.

**Consent to the commencement and carrying out of building
works or part of any building works or of street works.**

10

Permit No. BA 606/71
B.O.O. Ref. No. 2253/69
To: Chinachem Investment Co., Ltd.,
c/o Mr. C. H. Duff,
2013, Connaught Centre,
Hong Kong.

OFFICE OF THE BUILDING AUTHORITY.
17th November, 1971.

I hereby consent to the commencement and carrying out of the following works—
Building works at (No. and Name of Street) 12, Babington Path & Kotewall
Road on (Lot No.) I.L. 8171.

2. The above building works are to be carried out in accordance with the following plans, which have been approved by me and which have been returned to Mr. Lam Ching Wo, authorized architect, and in compliance with the Buildings Ordinance and the regulations made thereunder, and in accordance with Permit No..... issued under Section 42 of the Buildings Ordinance. 20

Supreme Court of Hong Kong	B.O.O. Reference	Plans	Date of Notice of Approval	Consent Date	Signature	Consent Renewed	Signature	
No. referred to in the agreed bundle 244 Building Authority Form 14 (Contd.)	LOWER BLOCK	3/2253/69 SPREAD FOOTING (FOR MAIN BUILDING)	21-10-71	17-11-71	Sd. H.J. Powell	11-5-76	Sd. E. Lok	10
		2/2253/69 BUILDING	8-9-70	7-1-72	Sd. H.J. Powell	10-11-76	Sd. W.D. Cheng	
		2/2253/69 BUILDING (AMENDMENTS)	9-10-71					
		3/2253/69 STRUCTURAL (FOR MAIN BUILDING)	21-10-71	2-6-72	Sd. D.H. Parsons	10-2-77	signature illegible	
		4/2253/69 DRAINAGE	10-2-72					
		3/2253/69 RAMP STRUCTURE PART RETAINING WALLS FOR ACCESS ROAD	25-2-72					
		UPPER BLOCK	2/2253/69 BUILDING	8-9-70	7-1-72	Sd. H.J. Powell	10-2-77	
	2/2253/69 BUILDING (AMENDMENTS)		9-10-71					
	3/2253/69 STRUCTURAL (FOR MAIN BUILDING)		21-10-71	2-6-72	Sd. D.H. Parsons			
	4/2253/69 DRAINAGE		10-2-72					
	3/2253/69 CAISSON RETAINING WALL & CAISSON		13-11-75	21-11-75	Sd. P.H. Hayward			
	3/2253/69 SPREAD FOOTING (AMENDMENTS) FOR LOWER BLOCK UNDERPINNING	24/1/76	30-3-76	Sd. P.H. Hayward				
		3/2253/69 CAISSON CAPS	13-11-75	25-11-76	Sd. W.D. Cheng			30
	UPPER BLOCK (STAGE I)	3/2253/69 SPREAD FOOTINGS (FOR MAIN BUILDING)	21-10-71	17-11-71	Sd. H.J. Powell	4-1-77	signature illegible	
UPPER BLOCK (STAGE II)	3/2253/69 SPREAD FOOTINGS (FOR MAIN BUILDING)	21-10-71	17-11-71	Sd. H.J. Powell	10-2-77			
	1/2253/69 SITE FORMATION (STAGE I) (UPPER BLOCK)	29-11-76	4-1-77	signature illegible				
	3/2253/69 CAISSONS (AMENDMENTS) (ACCESS ROAD)	19-3-76						
	1/2253/69 SITE FORMATION (STAGE II) (UPPER BLOCK)	12-1-77	10-2-77	signature illegible			40	

3. Your attention is drawn to the provisions of Section 14(2) of the Buildings Ordinance, and before commencing the above building works you should ascertain that they will not contravene the provisions of any enactment or the requirements of any authority or the terms or conditions of any Crown lease, licence or permit.

(Sd.) H. J. Powell
pro Building Authority.

Supreme
Court of
Hong Kong

No. referred
to in the
agreed
bundle
60
Copy
Building
Authority
Form 9
(application
for approval
of plans and
notice of
appointment
of architect
etc.)
3/12/71

GOVERNMENT OF HONG KONG.
Form 9.
BUILDINGS ORDINANCE.
(Chapter 123).
Section 15(1).
BUILDING (ADMINISTRATION) REGULATIONS.
Regulation 29.

Application for approval of plans of building works and/or street works*
and
Notice of appointment of authorized architect.

24 December, 1971....., 19.....

To the Building Authority,

I/we* CHINACHEM INVESTMENT CO., LTD.
(Name of applicant in block letters).

in accordance with the provisions of regulation 29 of the Building (Administration) Regulations—

- (a) apply for your approval of the
plans submitted herewith;
- (b) certify that the said plans have been prepared by Mr.
.....
authorized architect of
(Address of authorized architect).
.....
and
- (c) give you notice that I/we* have appointed the said Mr. C. H. DUFF.....
.....
authorized architect in respect of these works.

2. Particulars of the building works and/or street works*—(To be completed as appropriate).

GENERAL.

- (a) Number and name of street and locality 12 BABINGTON PATH & KOTEWALL ROAD.....
.....
- (b) Lot number with details of any section or subsection of the lot I.L. 8171.....
.....
- (c) Name and address of the owner CHINACHEM INVESTMENT CO., LTD., 14, NO. 9
ICE HOUSE STREET, HONG KONG......
- (d) Name and address of any duly authorized agent of the owner I.L......
.....
- (e) Number of any licence or permit relating to the proposed building works or site
PERMIT NO. BA 606/71, B.O.O. REF. NO. 2253/69.....
- (f) The date on which the tenure of the lot will expire in any case in which the unexpired
portion of the lease is less than 10 years I.L......
.....

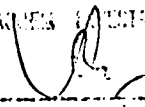
***BUILDING WORKS.**

- (a) Width of street or streets upon which the building abuts or fronts
- (b) The intended use of the building or parts thereof on completion of the building works
- (c) Details of any conditions of sale, any particular lease covenants affecting the height, design, type or use of the building which may be erected on the lot or permit area

***STREET WORKS.**

- (a) Width of street or streets from which access is to be obtained
- (b) Whether the street works are for construction of an access road or a private street
- (c) If an access road, state the number of separate buildings or flats (with total floor areas) for which it is intended to provide access
- (d) Details of any conditions of sale and any particular lease covenants affecting the street works

ENGINEERS & ARCHITECTS CO., LTD.


.....
Signature of applicant.

....., 19.....

I confirm that I have been appointed as authorized architect in respect of the above described works.


.....
Signature of authorized architect.

* Delete whichever is inapplicable.

..... 3rd October 1971.

Supreme
Court of
Hong Kong

No. referred
to in the
agreed
bundle
62
Photograph
showing
Inland Lot
No. 8171
and
neighbouring
premises
21/5/73



Supreme
Court of
Hong Kong

**COPY LETTER FROM F. ZIMMERN & CO.
TO BUILDING AUTHORITY**

23rd June 1972.

No. referred
to in the
agreed
bundle
63
Copy letter
F. Zimmern
& Co. to
Building
Authority
23/6/72

The Office of the Building Authority
Murray House
Garden Road
Hong Kong

Sir,

Re: Inland Lot - 8171, No. 12 Babington Path

We act for Chinachem Investment Co. Ltd., the owners of the above premises. 10

Our clients were in the course of doing the foundation works to the redevelopment of the above premises when the recent landslide at Poshan/Conduit/Kotewall Roads affected further building works to our clients' property.

In order not to hamper rescue operations affecting the aforesaid areas, our clients have voluntarily ceased building operations on their site. It is unlikely that our clients will resume building operations until such time as the affected areas are reopened.

Our clients have a certain quantity of building equipments on the above site. It would be appreciated if premises could be given to our clients to enter the affected area so as to reach the above property in order to enable our clients to remove their building equipments. Your assistance will be appreciated. 20

Yours faithfully,

Supreme
Court of
Hong Kong

**COPY LETTER FROM F. ZIMMERN & CO.
TO DIRECTOR OF PUBLIC WORKS**

No. referred
to in the
agreed
bundle
64
Copy letter
F. Zimmern
& Co. to
Director of
Public
Works
3/8/72

3rd August 1972

The Hon. J. J. Robson,
Director of Public Works,
Murray Building,
Garden Road,
Hong Kong

Dear Sir,

Re: Inland Lot No. 8171 No. 12 Babington Path

10

We act for Chinachem Investment Co. Ltd. the owners of the above premises and for your information we enclose herewith copy of a letter to the Office of the Building Authority dated 23rd of June 1972, and our clients' letter to the B.O.O. dated 10th July.

We are instructed by our clients that since the closure of the Poshan/Conduit/Kotewall Roads area, our clients have not been able to execute any further construction works on their site. This, perhaps, is understandable as further building operations on our clients' site might hamper operations to the aforesaid areas caused by the recent landslide.

We are also instructed by our clients that those engaged in the recent rescue operations in the affected areas have dumped or otherwise deposited on our clients' site a huge quantity of earth, debris etc. from the adjoining sites. We would like your confirmation that you will, in due course, ensure that such earth, debris etc. will be removed from our clients' site at Government expense. 20

We have also been instructed by our clients to enquire of you of the approximate date when building operations could be resumed on their site. Your early reply will be appreciated.

Yours faithfully,

Supreme
Court of
Hong Kong

**LETTER FROM DIRECTOR OF PUBLIC WORKS
TO F. ZIMMERN & CO.**

14th August 1972.

No. referred
to in the
agreed
bundle
65
Letter
Director of
Public
Works to
F. Zimmern
& Co.
14/8/72

Messrs. F. Zimmern & Co.,
402, Holland House,
Ice House Street,
Hong Kong.

Dear Sirs,

**I.L. 8171
12 Babington Path**

10

Thank you for your letter dated 3rd August 1972. From time to time a comparatively small amount of salvaged material has been placed temporarily on your client's site, there has certainly been no dumping or depositing of a huge quantity of earth and debris. It is rather the case that a huge quantity of debris etc. has been removed from your client's site in the case of rescue/body recovery operations, and the clearance of nullahs by Highways Office, Public Works Department. Any material arising from the latter operation will be removed in due course.

I am afraid that I am unable at the present time to answer your question as to when building operations could be resumed on your client's site. Clearance work continues and investigations into a number of considerations affecting development are in hand. You (or your client) will be addressed further, as soon as possible, on this subject. 20

Yours faithfully,

(Sd.) A. S. Robertson
Actg. Director of Public Works

**COPY LETTER FROM C. H. DUFF
TO DIRECTOR OF PUBLIC WORKS**

No. referred
to in the
agreed
bundle
66
Copy letter
C.H. Duff
to Director
of Public
Works
27/10/72

27th October, 1972

The Director of Public Works
Public Works Department
Murray Building
Hong Kong

Dear Sir:

**I.L. 8171
Babington Path**

10

I refer to your letter of 14th August, 1972, addressed to Messrs. F. Zimmern & Co. (Ref: P.W.D. 5502/72 (1) and in particular to the last paragraph thereof.

As Authorized Architect for this development I am deeply concerned that the Building Authority is still unable to give me any idea as to when building operations may be resumed on this site. I feel it imperative that the general foundation work, including retaining walls, be completed by the end of the dry season and I am naturally disturbed to see the dry weather slipping by with the site still occupied by your Department and with no indication as to when it can be handed back to my clients.

I am particularly anxious to proceed immediately with the following work and any help you can give me toward this end will be sincerely appreciated:—

20

- 1) Structural details and calculations (embodying my proposed amendments to the original Architect's design) for the uncompleted sections of the new R.C.C. retaining wall immediately below Kotewall Road, were submitted to the Building Authority on 27th May, 1972, since when I have received no communication. It is noted that during the past 5 months considerable erosion has taken place.
- 2) By June 12th, 1972, the foundation of the lower of the two proposed 12 storey apartment blocks, together with some of the decking and columns of the parking area, had been completed. The main raft (core) of the foundation appears to have withstood the heavy impact, imposed upon it by the landslide, without critical damage but it is clear that parts of the structure are unusable. However, a detailed investigation will be necessary before any accurate assessment of the condition of the structure can be made. This will involve removal of some 25 ft. depth of earth now piled up against the South side of the structure. I would like to proceed now with this work.
- 3) The old nullah, which ran down the Eastern boundary of the site, was completely buried by the landslide, since when the water has been finding its own way underground to the lower end of the site where it flows out, at various points, from the lower side of the newly constructed concrete foundation. The presence of this water will further complicate any remedial work on the East

30

40

Supreme
Court of
Hong Kong

No. referred
to in the
agreed
bundle
66
Copy letter
C.H. Duff
to Director
of Public
Works
27/10/72
(Contd.)

side of the site. Please let me know when restoration work on this nullah is expected to commence and when the temporary nullah constructed by your Department across the site will be removed.

- 4) The foundations of the upper of the two 12 storey blocks are situated in that part of the site which was not affected by the landslide. May I please have permission to proceed with this part of the work in accordance with the plans already approved and the consent to commence work already given.

Finally, I submit that this project, which is on one of the 3 "disaster" sites, should be treated as a special case and accordingly I ask you to grant a degree of priority in the matter of processing of plans and documents by the Building Authority. 10

Yours faithfully,
(Sd.) C. H. Duff

**LETTER FROM BUILDING AUTHORITY
TO C. H. DUFF**

No. referred
to in the
agreed
bundle
67
Letter
Building
Authority to
C.H. Duff
3/11/72

3rd November, 1972

C. H. Duff, Esq.,
539 Alexandra House,
Hong Kong.

Dear Sir,

I.L. 8171 — Babington Path

I refer to your discussions with the undersigned and to your letter dated 27th October 1972 addressed to the Director of Public Works. 10

2. It is now agreed that the work on adjoining and nearby sites and the investigations carried out by the P.W.D. have progressed to the point where work related to the redevelopment of I.L. 8171 could be recommenced. However it will be necessary for 'consent' to resumption of work to be obtained (in view of the delay of over 3 months) and this consent will not be issued until the project has been completely reconsidered and further plans have been submitted and approved.

3. It will be necessary for you to resubmit detailed proposals for safeguarding the stability of all land adjoining your lot particularly the hillslope below Kotewall Road on which your access road is presumably to be constructed. Your site formation and foundation proposals should be accompanied by supporting calculations and based on data obtained from a comprehensive site investigation. The calculations must also make allowance for fluctuations in the natural water table and the saturation of the surface soil, equivalent to at least the conditions experienced in June 1972. In addition the proposal should be supported by a construction programme and plans and notes clearly indicating the steps to be taken. This will prevent a dangerous situation materialising during the construction phase. 20

4. As you say in your letter, it is clear that parts of the structure, so far erected, are unusable and must be demolished. If it is your intention to retain any part of the structure (or foundations) I shall require to be completely satisfied that these parts are in no way affected by earth movement and that these parts can be incorporated in the building safely. Again this requirement must be related to the slope analysis data and comprehensive site investigations. 30

5. It will be apparent that I am not, at this stage, prepared to consent to the recommencement of works to erect structures, nor to any cutting or filling in or on the site contours as they were prior to June 18th. I would, however, be prepared to agree to allow the removal of spoil and also demolition works on approval of plans showing your intentions and I would be prepared to deal with such plans as a priority issue.

6. I can also advise you that the Highways Office is about to start on the restoration of the major surface water drain adjoining the western boundary of the site and the diversion of the temporary nullah across the site. The nullah adjoining the eastern boundary of the site will in future be used only for the disposal of local storm water 40

Supreme
Court of
Hong Kong

No. referred
to in the
agreed
bundle
67
Letter
Building
Authority to
C.H. Duff
3/11/72
(Contd.)

and the restoration of this nullah will be commenced as soon as possible.

7. It will not be possible to proceed with the consideration of the structural details and calculations for the retaining wall held in this office until it can be seen how this wall relates to the site formation plans required.

Yours faithfully,
(Sd.) J. G. Stean
pro Building Authority

Supreme
Court of
Hong Kong

**COPY LETTER FROM C. H. DUFF TO BUILDING AUTHORITY
WITH COPY BUILDING AUTHORITY FORM 13 AND COPY
SKETCH PLAN THERETO ANNEXED**

No. referred
to in the
agreed
bundle
68
Copy letter
C.H. Duff
to Building
Authority
with copy
Building
Authority
Form 13
and copy
sketch plan
thereto
annexed
22/11/72

The Building Authority,
Public Works Department,
Murray Building,
Hong Kong

22nd November, 1972

Dear Sir,

I.L. 8171 — Babington Path

10

Pursuant to the conversation between Mr. Kennard, Mr. Brian Boys and myself on 20th November, 1972, I now submit form 13 requesting consent to commence work on the removal of spoil and debris deposited on the above site by the landslide of June 1972, and to demolish the beams and columns in the new building which have been damaged due to the landslide. The location of the intended work is indicated in colour on the enclosed sketch plan.

It is clearly understood that the work proposed must not in any way disturb the original profile of the site as it existed prior to 18th June, 1972.

Your assistance in this matter is greatly appreciated.

Yours faithfully
C. H. DUFF

20

Supreme Court of Hong Kong

P.W.D.-B.A. 13 (S.) 6120013
8,000-10/70-B46835

GOVERNMENT OF HONG KONG.

Form 13.

BUILDINGS ORDINANCE.

(Chapter 123).

Section 14.

BUILDING (ADMINISTRATION) REGULATIONS.

Regulation 31.

Application for consent to the commencement and carrying out of building works or part of building works or of street works.

No. referred to in the agreed bundle 68
Copy letter C.H. Duff to Building Authority with copy Building Authority Form 13 and copy sketch plan thereto annexed 22/11/72 (Contd.)

22 November, 1972.

To the Building Authority,

I/We, (name of applicant in block letters) **Charles H. Duff**
apply for your consent to the commencement and carrying out of the following works (here specify the type of work, e.g. building works or street works or, if the application is in respect of part only of building works, specify the part in respect of which the application is made) **Removal of spoil and debris deposited on this lot by the landslide of June, 1972 and demolition of damaged concrete beams and columns in new building.**
at (No. and name of street) **12 Babington Path**
on (Lot No./Permit Area No.) **I.L. 8171**

1. The following plans of the above works have been approved by you—

Plans.	Date of notice of approval.	B.O.O. Ref. No.
(see enclosed sketch plans)		1/2253/69

- 3. *The certificate, Form 10, required by regulation 17 of the Building (Administration) Regulations, in connexion with the proposed structural use of steel and/or reinforced concrete, was submitted on, 19.....
- 4. *The certificate (stability certificates) required by regulation 18 of the Building (Administration) Regulations was submitted on, 19.....

[Handwritten signature]
Signature of applicant.

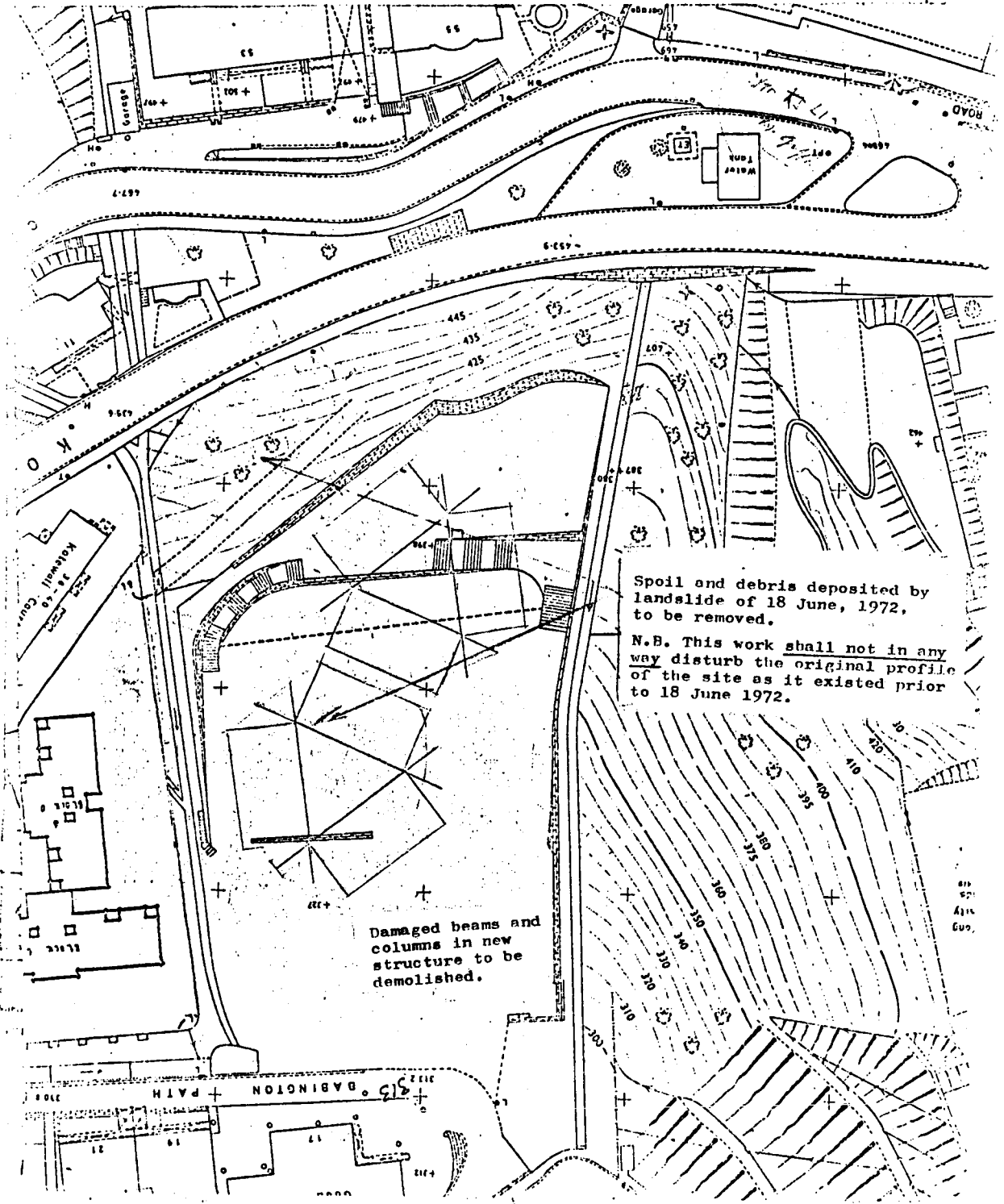
22 November, 1972.

* Delete if not applicable.

Supreme Court of Hong Kong

No. referred to in the agreed bundle 68

Copy letter C.H. Duff to Building Authority with copy Building Authority Form 13 and copy sketch plan thereto annexed 22/11/72 (Contd.)



I.L. 8171 - BABINGTON PATH



Supreme
Court of
Hong Kong

**LETTER FROM BUILDING AUTHORITY
TO C. H. DUFF**

No. referred
to in the
agreed
bundle
69
Letter
Building
Authority to
C.H. Duff
22/11/72

C. H. Duff, Esq.,
Room 1506,
Prince's Building,
Hong Kong.

22nd November, 1972.

Dear Sir,

Babington Path, Hong Kong — I.L. 8171

I wish to make a comprehensive inspection on site with a view to assessing the damage resulting from the June landslide. 10

I would be grateful if you would kindly make arrangements to remove as early as possible debris and slip material to enable the inspection to be carried out.

You will be well aware of the importance of having site formation works in an advanced stage before the next wet season and I shall be pleased if you will give prompt attention to submitting your proposals.

(handwritten note)

4. We spoke Duff/Kennard & you will apply for approval & plans indicating spoil to be removed & obtain consent in the usual manner.

Yours faithfully,
(Sd.) E. T. Kennard
pro Building Authority

20

NO. REFERRED TO IN THE AGREED BUNDLE 70
RAINSTORM DISASTER 1972
(FINAL REPORT OF THE COMMISSION OF INQUIRY)
JANUARY 1972
(actual report annexed hindmost)

Supreme Court of Hong Kong

No. referred to in the agreed bundle 71 Building Authority Form 14 (consent) 1/12/72

GOVERNMENT OF HONG KONG.

Form 14.

BUILDINGS ORDINANCE.

(Chapter 123).

Section 14.

BUILDING (ADMINISTRATION) REGULATIONS.

Regulation 32.

Consent to the commencement and carrying out of building works or part of any building works or of street works.

Permit No. BA 634/72

B.O.O. Ref. No. 1/2253/69

To: Mr. Charles H. Duff,

522 Alexandra House,

Hong Kong.

OFFICE OF THE BUILDING AUTHORITY.

1st December, 1972.

I hereby consent to the commencement and carrying out of the following works— Site clearance & the demolition of damaged building works, subject to the conditions stated below

at (No. and Name of Street) 12 Babington Path

on (Lot No./Permit Area No.) I.L. 8171

2. The above building works are to be carried out in accordance with the following plans, which have been approved by me and which have been returned to Mr. Charles H. Duff, authorized architect, and in compliance with the Buildings Ordinance and the regulations made thereunder, and in accordance with Permit No. issued under Section 42 of the Buildings Ordinance.

Table with 7 columns: Reference, Block, Date of Notice of Approval, Consent Date, Signature, Consent Reference, Signature. Contains conditions (a) and (b) regarding site clearance work.

3. Your attention is drawn to the provisions of Section 14(2) of the Buildings Ordinance, and before commencing the above building works you should ascertain that they will not contravene the provisions of any enactment or the requirements of any authority or the terms or conditions of any Crown lease, licence or permit.

Signature of Building Authority official, pro. Building Authority.

Supreme
Court of
Hong Kong

**LETTER FROM BUILDING AUTHORITY
TO C. H. DUFF**

No. referred
to in the
agreed
bundle
72
Letter
Building
Authority to
C.H. Duff
14/12/72

14th December, 1972

Mr. Charles H. Duff,
539 Alexandra House,
Hong Kong.

Dear Sir,

**Babington Path, Hong Kong —
I.L. 8171 (Formerly No. 12)**

Further to my letter to you dated 22nd November, 1972 I have not noticed any work on site to remove the debris and slip material and I shall be obliged if you will kindly hasten commencement of this work. 10

I must again remind you of the importance of having site formation works well in hand before the next wet season.

Yours faithfully,
(Sd.) E. T. Kennard
pro Building Authority

CIRCULAR LETTER

Circular Letter No. 60

No. referred
to in the
agreed
bundle
245
Circular
letter —
Building
Authority
28/12/72

To All Authorized Architects

**Building Proposals — Site Investigations
and Earthwork Proposals**

Following the June rainstorms, I arranged the formation of a small Civil Engineering unit in the Buildings Ordinance Office to investigate potentially dangerous situations arising out of earthworks connected with private development. In the past few months this Unit has dealt with a number of important cases, amongst others, and it has emerged that proposals are made by *some* Authorized Architects based on inadequate or misinterpreted site investigations. This has resulted in unnecessary work and in an overall delay in approving plans, including those properly submitted. The intention of this circular letter is therefore to correct this situation and establish the framework of a Standard Earthwork submission that will be equally applicable to all Authorized Architects. 10

2. The June 1972 Rainstorm Commission of Enquiry Report into rainstorm damage has now been submitted to the Governor and, pending the implementation of any recommendation it may include, I would advise that it is my intention as the Building Authority to require from the date of receipt of this letter a much improved standard of site report. The provision of Section 40 Sub-section (2B) of the Buildings Ordinance as inserted by Section 5 of the recent Buildings (Amendment) (No. 2) Ordinance 1972, reflects the seriousness with which I must view the situation, and consequently failure on the part of an Authorized Architect to submit a comprehensive report, backed by suitable drawings and calculations, will result in delay, if not disapproval under Section 16(1)(i) and Section 15. 20

3. It is therefore in your own best interest to investigate and report on your earthwork proposals in sufficient detail to ensure that they will at no stage endanger lives, property (including Crown land, utilities and public services) in the immediate or surrounding areas. (Paragraph 5 of this letter suggests how this may be achieved).

4. Your attention is also directed to Section 40, Sub-section 2(A), para. (b) of the Buildings Ordinance as inserted by Buildings (Amendment) (No. 2) Ordinance 1972, Section 5. In the course of their work the Civil Engineering Unit have also noted that there are cases where proposals have been submitted without regard for nearby existing foundations. In the event that this situation passes unnoticed and an Architect proceeding with the construction of a development subsequently finds it necessary to amend his design he should note that amending plans *must* be submitted before proceeding further (note sub-paragraph (c) of the same Building Amendment). In this context, it should be observed that future submissions should be based on adequate investigations to prevent such occurrences and the Authorized Architect may consult with the Buildings Ordinance Office at the time of preparing plans if in doubt, provided:— 30 40

(a) that he can satisfy the B.O.O. that he has not been able to obtain the

foundation details in any other way;

- (b) that he will attend in person to accept such general information as the B.O.O. considers appropriate. (The Architect in such a case will be permitted to view but not remove drawings.) and,
- (c) that he accepts that the B.O.O. offers such information in good faith and cannot vouch for its accuracy. The Authorized Architect will be required to confirm the validity of the information (by testing if needs be).

5. Consequently, future building submissions should include:—

- (a) Crown Lands & Survey Office approval of boundaries (where applicable), conformity with lease conditions, and zoning requirements. 10
- (b) Verification by the Authorized Architect; that Highways Division, and the Waterworks Office have raised no objection (where applicable) to the earthworks proposed.
- (c) Such drawing/s, site investigation data and supporting calculations to place beyond reasonable doubt the safety of the earthworks envisaged and in addition to show (where applicable) details relating to:—
 - (i) initial formation works;
 - (ii) temporary surface water drainage and access provisions;
 - (iii) standards for compaction of fill and type of material to be used;
 - (iv) piling, shoring or other means provided for the support of nearby structures, excavations, slopes, etc.; 20
 - (v) final formation and earthwork intentions in connection with the actual building works, drainage and access;
 - (vi) the disposition and size of all superimposed loads influencing the stability of any part of the proposal or nearby structures, nullahs, etc.;
 - (vii) the settlement and bearing characteristics of the soil underlying foundations and the level of the bedrock;
 - (viii) special drainage provisions made to cope with spring water or a high water table; 30
 - (ix) methods of surface protection such as turf, chunam, etc.;
 - (x) a programme covering all earthworks detailing in particular those to be carried out between the months of May and October in any year. (This programme should make a rational attempt to foresee problems

likely to be encountered during the rainy season).

6. The points raised in paragraph 5 are by no means exhaustive and only cover the salient features required in the future. Approval will be delayed if the submission relating to the requirements noted in paragraph 5 above is not of a professional standard, and may result in certain instances in action being taken under Section 7(1).

7. Finally, I would indicate that an explanatory guide is under preparation setting out the basic procedures to be adopted in future foundation and earthworks submissions. This circular letter is an interim measure and the guide will be issued shortly.

(Sd.) J. J. Robson
Building Authority
28.12.72.

10

Supreme
Court of
Hong Kong

**LETTER FROM BUILDING AUTHORITY
TO C. H. DUFF**

No. referred
to in the
agreed
bundle
73
Letter
Building
Authority to
C.H. Duff
16/1/73

16th January, 1973.

Mr. Charles H. Duff,
539, Alexandra House,
Hong Kong.

Dear Sir,

**Babington Path, Hong Kong
I.L. 8171 (Formerly No. 12)**

Further to your discussion with Mr. Holroyd on 12th January 1973 an inspection 10
has been made and it is agreed that the existing r.c.c. structure is extensively damaged
although it is not possible at this stage to see the full extent of the damage.

In order to save time and to facilitate reaching agreement on the amount of
demolition to be undertaken will you kindly forward two copies of plans showing your
proposals for demolition.

Yours faithfully,
(Sd.) E. T. Kennard
pro Building Authority

Supreme
Court of
Hong Kong

**COPY LETTER FROM C. H. DUFF
TO BUILDING AUTHORITY
(copy drawing therein referred to missing)**

No. referred
to in the
agreed
bundle
74

24th January, 1973

Copy letter
C.H. Duff
to Building
Authority
(copy
drawing
therein
referred to
missing)
24/1/73

**Building Authority,
Public Works Department,
Murray Building,
Hong Kong**

Ref: BOO D698/72/HK

Attention of Mr. E. T. Kennard

Dear Sir:

10

**Babington Path, Hong Kong
I.L. 8171 (formerly No. 12)**

In response to your letter of 16th January, 1973, I send herewith two copies of Drawing Nos. E9^A and E78^A upon which I have indicated the amount of demolition work which it is proposed to carry out at the present time.

You will note that the proposal is to demolish all beams, deck slabs and columns right down to the footings, including all ground beams. This will leave only the spread footings and the main raft foundation, all of which will be subject to careful examination after the presently proposed demolition has reached a point where effective inspection is possible.

20

I now propose to proceed with the demolition work as described above and will notify you when the spread footings and main raft are exposed for your inspection.

Yours faithfully
(Sd.) C. H. Duff

Supreme
Court of
Hong Kong

**LETTER FROM SCOTT WILSON KIRKPATRICK & PARTNERS
TO DEFENDANT**

No. referred
to in the
agreed
bundle
76
Letter Scott
Wilson,
Kirkpatrick
and Partners
(hereinafter
referred to
as S.W.K.
& P.) to
Defendant
14/8/73

BY HAND — URGENT

Chinachem Group of Companies
Rooms 1001-3 Bank of Canton Building
6, Des Voeux Road Central
Hong Kong

14th August, 1973

Attn: Mr Alan Kwan
Dear Sirs,

12 Babington Path

10

Further to the recent visit to our office of Mr Kwan, together with Mr Charles Duff, we submit a draft of our Form of Agreement and Conditions of Engagement. You will note that the Appendix to the Agreement on the second page is self-explanatory and, we trust, covers all points.

2. We have obtained from Messrs Survey Services the quotation of a fee of HK\$5,800 for carrying out a detailed land survey of the site. We consider that such a survey will be necessary.
3. We shall be pleased to receive your agreement to the draft documents attached and to our instructing Survey Services, on your behalf, to proceed with the survey.

Yours faithfully,
SCOTT WILSON KIRKPATRICK & PARTNERS

20

Supreme
Court of
Hong Kong

**COPY LETTER FROM DEFENDANT
TO SCOTT WILSON KIRKPATRICK & PARTNERS**

14th August, 1973.

No. referred
to in the
agreed
bundle
77
Copy letter
Defendant to
S.W.K. & P.
14/8/73

Scott Wilson Kirkpatrick & Partners,
Star House, 17th Floor,
Salisbury Road,
Hong Kong.

Dear Sirs,

12, Babington Path

Thank you for your letter dated 14th August, 1973. We confirm that terms of engagement are in general acceptable to us, except that we shall be pleased if you can insert the following sentence below the two points in the 1st paragraph of the Appendix. 10

“The proposal will be supported by plans and notes clearly indicating the precautionary measures to be taken and the working procedure to be followed to prevent a dangerous situation from arising during the construction phase”

The draft Agreement and Conditions of Engagement is now returned for your amendment.

Meanwhile, we shall be pleased if you can proceed to instruct Messrs. Survey Service for the detailed land survey. 20

A copy of the letter from the Building Authority specifying their requirement is also enclosed for your reference.

Yours faithfully,
(Sd.) Alan Kwan
Director

Supreme
Court of
Hong Kong

**LETTER FROM SCOTT WILSON KIRKPATRICK & PARTNERS
TO DEFENDANT**

No. referred
to in the
agreed
bundle
78
Letter
S.W.K. & P.
to Defendant
7/9/73

Chinachem Group
1001-3 Bank of Canton Building
6 Des Voeux Road Central
Hong Kong

7th September, 1973

Attn: Mr Alan Kwan

Dear Sirs,

12, Babington Path

10

We regret the delay, due to a misunderstanding, in replying to your letter of 14th August but confirm that work has proceeded in the meantime and that we have already received the topographical sections of the site from Messrs. Survey Services.

2. We now enclose two copies of the Agreement and Conditions of Engagement revised to meet the point made in your letter.

3. We trust that the amended documents are acceptable to you and look forward to their completion, signature and return.

Yours faithfully,
SCOTT WILSON KIRKPATRICK & PARTNERS

Supreme
Court of
Hong Kong

**COPY LETTER FROM DEFENDANT
TO SCOTT WILSON KIRKPATRICK & PARTNERS**

No. referred
to in the
agreed
bundle
81

Copy letter
Defendant to
S.W.K. & P.
15/9/73

Scott Wilson Kirkpatrick & Partners,
Star House,
Salisbury Road,
Hong Kong.

15th September, 1973.

Attention: Mr. Storry

Dear Sirs,

12, Babington Path

10

Please find enclosed a full set of General Plans (Nos. C1 to C7 and C8 to C13).
The elevations and sections may give you a fair idea of the relationship between the
building, retaining wall and Kotewall Road.

Yours faithfully,
(Sd.) Alan Kwan
Director

Supreme
Court of
Hong Kong

**LETTER FROM SCOTT WILSON KIRKPATRICK & PARTNERS
TO DEFENDANT**

No. referred
to in the
agreed
bundle
82
Letter
S.W.K. & P.
to Defendant
24/9/73

Chinachem Group Of Companies,
Rooms 1001-3 Bank of Canton Bldg.,
6, Des Voeux Road, Central,
Hong Kong.

24th September, 1973.

Attention Mr. Alan Kwan

Dear Sirs,

12 Babington Path

10

Further to the recent telephone conversation between you and Mr. S. G. Elliott, we have pleasure in enclosing two copies of each of the three drawings submitted by Survey Services.

Would you please send one copy of each to the Architect.

Yours faithfully,
SCOTT WILSON KIRKPATRICK & PARTNERS

Supreme
Court of
Hong Kong

**COPY LETTER FROM DEFENDANT
TO SCOTT WILSON KIRKPATRICK & PARTNERS**

No. referred
to in the
agreed
bundle
83

31st October, 1973.

Copy letter
Defendant to
S.W.K. & P.
31/10/73

Scott Wilson Kirkpatrick & Partners,
Star House,
Salisbury Road,
Kowloon.

Attention: Mr. K. A. Philips

Dear Sirs,

I.L. 8171, No. 12, Babington Path

10

We are writing to enquire about the progress of your preparation of a report of the above site.

As our project architect, Mr. Charles H. Duff, will be out of the Colony towards the middle of November, we are anxious to obtain your report as soon as possible and finalize our submission to the Building Ordinance before Mr. Duff takes off.

Furthermore, since you have taken up the matter for a period of over two months, we wish to have your advice on a definite date when your report will be forthcoming. We shall be most pleased to furnish any further information you require from us. Mr. Duff has also kindly promised to meet you any time at your convenience for joint consultation in order to draft your final report.

20

Yours faithfully,
Alan Kwan
Director

Supreme
Court of
Hong Kong

**COPY LETTER FROM DEFENDANT
TO SCOTT WILSON KIRKPATRICK & PARTNERS**

No. referred
to in the
agreed
bundle
84

Copy letter
Defendant to
S.W.K. & P.
8/11/73

Scott Wilson Kirkpatrick & Partners,
Star House,
Salisbury Road,
Kowloon.

8th November, 1973.

Attention: Mr. B. Ward

Dear Sirs,

12 Babington Path, I.L. 8171

10

Further to our meeting on 6th November, 1973, we are now enclosing the Boring Records (second stage) covering the area of the Approach Road as performed by the Boring Engineering Limited in October, 1970.

We hope these records would be of assistance to your analysis.

Yours faithfully,
(Sd.) Alan Kwan
Director

Supreme
Court of
Hong Kong

**LETTER FROM SCOTT WILSON KIRKPATRICK & PARTNERS
TO DEFENDANT**

No. referred
to in the
agreed
bundle
85
Letter
S.W.K. & P.
to Defendant
16/11/73

Chinachem Group,
1001-3 Bank of Canton Building,
6, Des Voeux Road, Central,
Hong Kong.

16th November, 1973.

Dear Sirs,

12 Babington Path

The following are the boring instructions for the above site, the locations of the five boreholes being given on the attached site plan of which there are two copies:— 10

1. boreholes A & B; 6-inch diameter percussion boring as far as possible (probably about 15-30 ft) taking alternate SPT and U4 undisturbed samples at 5-ft intervals. Continue drilling with NX size, with SPT if core recovery impracticable.
2. boreholes, C, D & E; NX drilling with SPT where applicable.
3. 2-inch diameter slotted standpipe with nylon mesh (and filter backfill in case of 6-inch boreholes) to a depth of 40 ft in each borehole. To be provided with lockable caps.
4. Ground levels to be measured at borehole positions. 20
5. Depths: boreholes A 40'
 B 50'
 C 65'
 D 50'
 E 50'

Yours faithfully,
SCOTT WILSON KIRKPATRICK & PARTNERS
(Sd.) B. Ward

**COPY PRINTED LETTER FROM DEFENDANT
TO CUSTOMERS IN ENGLISH**

No. referred
to in the
agreed
bundle
86
Copy printed
letter
Defendant to
Customers in
Chinese and
English
4/12/73

4th December, 1973.

Dear Customers,

University Heights

No doubt that you have been aware of that the construction programme of the above building has been affected by the Po Shan Road land slip in June, 1972.

We are already in close touch with the Public Works Department and have the understanding that the construction work would be permitted subject to further site investigation and the implementation of certain precautionary measures. Such precautionary measures are required not because of any underdesign of the development; rather, it is because of the proximity of the above building to Kotewall Court that had collapsed during the rain storm. 10

We have already employed a reputable civil engineering consulting firm to do an extensive site investigation in order to make recommendations to the Government for measures to ensure the stability of the proposed development. However, this procedure in going to be time consuming. Though feeling confident that we would be able to eventually go ahead with the construction, we cannot be certain how much time it would require for all the negotiations with Government. But we have the common objective with every of our customers — i.e. try by all means to proceed with the construction work and to complete the building as soon as possible. 20

For those who urgently require accommodation, we have devised a scheme to provide immediate accommodations.

We have several buildings in locations like Tai Hang Road, Prince Edward Road, Waterloo Road and Boundary Street which are of equivalent quality and are either already completed or to be completed in one or two month time. We would be willing to exchange those flats with the ones in University Heights by the following methods:

- (1) A special discount will be given on the present market price of the exchanged flats. 30
- (2) The deposit or instalments already paid to us for the purchase of flats in University Heights will be applied to the purchase money of the exchanged flat plus a premium of 50% (e.g. If you have paid \$50,000.00 for your flat in University Heights, an amount of \$75,000.00 will be credited to the net purchase price of the new flat as being paid)

Please be assured that we have your interest in mind, and if you have any queries, do not hesitate to call the undersigned.

Yours faithfully,
(Sd.) Alan Kwan
Director 40

**COPY PRINTED LETTER FROM DEFENDANT
TO CUSTOMERS IN CHINESE**

No. referred
to in the
agreed
bundle
86

敬啟者：

Copy printed
letter

Defendant to
Customers in

Chinese and
English

4/12/73
(Contd.)

閣下也曾注意到自「七二年六月寶山道山坭崩瀉」事件後，本大廈之建築工程即受阻滯。因此事本公司已與工務局多次接觸，並取得以下之結論：

工務局要求公司進行更詳盡之探土工程及預防措施然後本大廈之建築工程即可繼續進行。此等預防措施之需求並非本大廈設計有所不善，實因本大廈隣近之蘇和大厦曾受豪雨而倒塌之原故而使到該地盆成為全港人仕所注目者。

本公司現已誠聘名顧問工程師，進行探土工作，並向工務局建議預防措施。然而此等建議及討論程序，將費時不少，深信建築工程仍當繼續進行，但預防措施之建議，必須經多方面討論，故必需稍費時日，但本公司與各客戶皆有一共同目標：「即彼等將盡所有能力，冀能在最短之期間再行動工並早日完成入伙。」本公司亦曾顧慮到急需居住之客戶，因此本公司現訂出方法以能立即替客戶解決住所問題。現時本公司有多幢已完成或本年底可入伙之大廈，如在大坑道，太子道，窩打老道及界限街等地區，此等大廈之建設皆與大學閣不相上下，本公司現願用以下方式與各客戶交換：

(1) 所交換之住宅單位，價錢將以市價給予特別折扣計算。

(2) 各客戶若已付大學閣之樓價（即已付之定金或分期款項）將升值百份之五十用作購買交換單位之樓價。——比方：某客戶在定購大學閣時已付樓價五萬元，此五萬元將升值百份之五十即七萬五千元正，作為交換單位所已付之數目。

本公司一向以客戶之利益為前題，倘若閣下有任何疑問，可致電本公司查詢，定當樂意詳為解答。此致
大學閣各貴客戶

華懋置業有限公司

一九七三年十二月四日

10

20

Supreme
Court of
Hong Kong

**COPY LETTER FROM LO KAM TO
TO PUBLIC WORKS DEPARTMENT**

No. referred
to in the
agreed
bundle
92
Copy letter
from
Lo Kam To
to Public
Works
Department
27/3/74

Mr. A. B. Lawrence,
Senior Building Surveyor (H.K.),
Building Ordinance Office,
Public Works Department,
Murray Building,
Garden Road,
Hong Kong.

27th March, 1974.

**Re: "University Heights" at Kotewall
Road, I.L. 8171, Hong Kong.**

10

Dear Sir,

I have purchased, by instalments, a flat in the "University Heights" at Kotewall Road, I.L. 8171, Hong Kong from the Chinachem Group of 1001-1003 Bank of Canton Building, 6, Des Voeux Road Central, Hong Kong on the date of 3rd April 1971.

However, owing to the Kotewall Road landslide in June 1972, the development of the above-mentioned project has been suspended since. At present, it appears to me that all reinforced-works on the slopes have been completed and I have approached the above-named Chinachem Group for information as when construction work of the said project will be resumed. To my utmost regret, no solid or definite reply from the developer is available. Therefore, I have resolved to seek information from your department of the following questions:

20

- (1) has the government ever imposed a cease-work order to the said project? If yes, and now that all the reinforced-works on the slopes have been completed, when will the government cancel the cease-work order and permit the developer to resume work on this project?
- (2) Has the government impose any additional restrictions on the development of the said project after the landslide, such as reduction of number of storeys, or alternations of plans?
- (3) Has the developer taken any active measures from your or any other governmental department(s) to seek permission to resume construction work on this project? Or whether the developer has informed your department that they have given up this project or postponed the development to no definite date.

30

I earnestly hope your goodself will clarify the above queries in your early convenience.

Thanking you in anticipation, I am

Yours faithfully,
Lo Kam-to

40

Supreme
Court of
Hong Kong

**PRINTED LETTER FROM HIGHWAYS OFFICE
TO C. H. DUFF**

No. referred
to in the
agreed
bundle
95
Printed
letter
Highways
Office to
C.H. Duff
16/4/74

Date 16th April, 1974

Mr. C. H. Duff,
2013, Connaught Centre,
Connaught Road Central,
Hong Kong.

Dear Sirs,

I.L. 8171 — Kotewall Road

It has come to my notice that the subject lot is in the progress of re-development under your supervision. 10

With the approach of the rainy season, I would like to invite your attention to the necessity of taking adequate precaution against possible natural damages to adjoining land/roads/properties as a consequence of your site operations. The following points may be worth particular notice:—

- (a) protection of slopes and cuttings
- (b) provision and maintenance of permanent/temporary stormwater drains and channels, &
- (c) possible wash-outs of soil from your site onto adjacent areas

Your co-operation will be very much appreciated. 20

Yours faithfully,
(Sd.) C. F. Liu
for Chief Engineer, Highways (H.K.)

Supreme
Court of
Hong Kong

**LETTER FROM PUBLIC WORKS DEPARTMENT
TO LO KAM TO**

No. referred
to in the
agreed
bundle
96
Letter from
Public
Works
Department
to
Lo Man To
22/4/74

22nd April, 1974.

Mr. Lo Kam-to,
15 O'Brien Road,
2nd floor,
Hong Kong.

Dear Sir,

12 Babington Path & Kotewall Road — I.L. 8171

Your letter dated 27th March, 1974 refers. The questions you raised in the letter are answered below: 10

1. No "cease works" order has been imposed.
2. This office has informed the architect for this project that before consent to resume works will be given, further plans showing detailed proposals for safeguarding the stability of all land adjoining this site should be submitted and approved by this office.
3. So far, the additional plans required have not been submitted.

You are advised that it is entirely up to the developer and architect to take the initiative in the development of a site. If you wish to pursue this matter further, I suggest you employ a solicitor who may be in a better position to give you advice. 20

Yours faithfully,
(Sd.) A. B. Lawrence
pro. Building Authority.

Supreme
Court of
Hong Kong

**COPY LETTER FROM DEFENDANT TO
SCOTT WILSON KIRKPATRICK & PARTNERS**

April 27, 1974.

No. referred
to in the
agreed
bundle
97

Copy letter
Defendant to
S.W.K. & P.
27/4/74

Scott Wilson Kirkpatrick & Partners,
Star House, Salisbury Road,
Kowloon.

Attention: Mr. S. G. Elliott

Dear Mr. Elliott,

No. 12 Babington Path

We refer to the telephone conversation between your Mr. Ward and this writer 10
in relation to the above job.

Your Mr. Ward confirmed that you have now all the necessary data to work
on and that the report would be ready before end of May if you can schedule the
necessary manpower to the work.

We wish to impress you our anxiousness in obtaining an early report from you,
possibly in early May. You will appreciate that your report will have to be submitted
to the Building Authority. Afterwards much time will have to be spent on the dis-
cussion with the B.O.O. and our architect and structural Engineer will also be involved
in making detailed proposals and amendments. As your Mr. Ward pointed out that 20
most of the site formation and foundation work have to be carried out and completed
during dry season, it is important that we get all proposals worked out and suitably
approved before September. In this connection, the early production of your report
is essential.

Although this may be a pretty small and trivial job to your Company, we would
be most grateful if you could see to it that we could have your report as soon as
possible.

Yours faithfully,
(Sd.) Alan Kwan
Director

Supreme
Court of
Hong Kong

**LETTER FROM SCOTT WILSON KIRKPATRICK & PARTNERS
TO DEFENDANT**

No. referred
to in the
agreed
bundle
98
Letter
S.W.K. & P.
to Defendant
9/5/74

BY HAND
Mr Alan Kwan
Chinachem Group
1001-3 Bank of Canton Building
6 Des Voeux Road Central
Hong Kong

9th May, 1974

Dear Mr. Kwan,

10

No. 12 Babington Path

Thank you for your letter dated 27th April 1974. As Mr. Elliott will not be back in Hong Kong until next week, I am replying on his behalf.

2. First let me assure you that the Firm values all commissions whether they be large or small.

3. I regret the delay that has taken place to-date on this project, this being to a large extent due to the necessity to carry out additional site investigation and soil testing. However, you will appreciate that in the case of the preparation of a specialist report, delays may sometimes occur due to key personnel not being immediately available. Moreover, as your site is not ideally situated for high-rise buildings a considerable amount of thought must of necessity be given to the problems raised by your development.

20

4. As you are aware, Dr H. Y. Wong, PhD is now working full-time and our geologist, Mr B. Ward part-time on the project and I expect that our report will be ready for submission to you in draft form by the end of May.

Yours sincerely,
(Sd.) C. M. Guilford

Supreme
Court of
Hong Kong

No. referred
to in the
agreed
bundle
100
Report of
S.W.K. & P.
8/74

REPORT OF SCOTT WILSON KIRKPATRICK & PARTNERS

**REPORT
ON
12 BABINGTON PATH**

AUGUST 1974

Consulting Engineers
SCOTT WILSON KIRKPATRICK & PARTNERS
Star House
Salisbury Road
Hong Kong

10

CONTENTS

No. referred
to in the
agreed
bundle
100
Report of
S.W.K. & P.
8/74
(Contd.)

1.	INTRODUCTION	
2.	SOIL PROPERTIES & PROPOSED DESIGN PARAMETERS	
	2.1 Soil Properties	
	2.2 Recommended Design Parameters	
3.	EXISTING SITE CONDITIONS	
	3.1 General	
	3.2 Stability of Existing Slopes	
	3.3 Foundations to be Constructed & Probable Geotechnical Problems	10
4.	FOUNDATION CONSTRUCTION FOR THE SUPERSTRUCTURE	
	4.1 Site Formation Plan for Foundation Works	
	4.2 Slope Stability during Foundation & Superstructure Construction	
	4.3 Proposed Construction Procedures & Methods	
	4.4 Bearing Capacity of Existing Site & Suitability of Finished Foundations	
5.	FOUNDATION CONSTRUCTION FOR ACCESS ROAD	
6.	LONG-TERM STABILITY OF COMPLETED SITE	20
7.	SUMMARY OF WORKING SCHEDULE	
8.	GENERAL CONCLUSIONS & RECOMMENDATIONS	
	APPENDIX I — FIGURES 1— 11	
	APPENDIX II — BEARING CAPACITY CALCULATIONS	
	APPENDIX III — DRILL HOLE LOG	

1. INTRODUCTION

At the time of the 1972 Po Shan Road landslides the present site was under construction, with the lower triangular foundations and the spread footings for the lower block completed. The first floor of the lower block was also being built. The extent of the landslide was as shown in Fig. 1. It can be seen that the landslide practically reached the lower block, and therefore the whole site was covered with debris carried down by the landslide. Afterwards, the first floor was demolished but with the foundations remaining and the site partly cleared up. Unfortunately, the ground north of the completed foundations was over-excavated, and part of the foundation was therefore exposed.

10

Because of the landslide, construction work had to be stopped and cannot be resumed until B.O.O. are satisfied with the stability conditions within the site as well as of the surrounding area during the construction of the various foundations. The most critical are:—

- (1) the upper triangular foundation
- (2) the exposed parts of the foundations for the lower block
- (3) the access road foundations and the associated retaining wall.

2. SOIL PROPERTIES & PROPOSED DESIGN PARAMETERS

The first of the two stages of the site investigation was done in 1970 before the 1972 Po Shan Road landslide, and the second was carried out afterwards in the winter of 1973. The locations of the various boreholes are shown in Fig. 2.

20

2.1 Soil Properties

Soil investigation reveals that the soil between Kotewall Road and the northern corner of the lower triangular foundation is decomposed volcanic rock, whilst that further north is decomposed granite. The exact dividing lines between these two types of soil are not known. The soil on the slope below Kotewall Road however, is decomposed volcanic rock as can be seen from the grading curves of samples from Boreholes B — E.

In general, the upper 10-20 ft. of the soil is fairly loose, with an SPT (Standard Penetration Test) value usually less than 20. From readings in Boreholes 1 and 2, and in standpipes in Boreholes A — E, the water table is seen to be about 20-30 ft. below the existing ground level during the dry season of 1973. Boulders are encountered at various depths up to about 50 ft., but fresh rock has not been found even in the deepest borehole (C — stopped at 80 ft.)

30

Unconsolidated undrained triaxial tests on 4 decomposed volcanic rock samples from Boreholes 1, 4 and 5 (and at depths below existing ground surface varying from 10-25 ft.) indicate that undrained cohesion (c_u) varies from 710 lb/ft.² to 1690 lb/ft.², and undrained angle of friction (ϕ_u) from 4° to 16°, giving average values at an average depth of 20 ft. of 1200 lb/ft.² and 10.5° respectively. Consolidated drained tests on

4 decomposed granite samples from Borehole A give average angle of friction (ϕ') of $32\frac{1}{2}^\circ$ and cohesion (c') of 974 lb/ft², also at an average depth of 20 ft. below existing ground surface.

All those samples are not fully saturated, with the four decomposed volcanic rock samples having an average degree of saturation of about 92%, and the three decomposed granite ones of about 83%. This can be expected in view of the present position of the water table, which is at about 20-30 ft. below the existing ground level during sampling. The decomposed volcanic samples should also have a higher degree of saturation than that of decomposed granite because of the more fine-grained structure.

10

It should also be noted that the above undrained strength parameters ($\phi_u = 10.5^\circ$ and $c_u = 1200$ lb/ft²) of decomposed volcanic at an average depth of 20 ft. correspond approximately to effective strength parameters of $\phi' = 25^\circ$ and $c' = 600$ lb/ft.² at the same depth.

2.2 Recommended Design Parameters

Completely decomposed volcanic rock/fill or colluvium of volcanic origin

(a) for soil materials within the first 20 ft. below ground surface (mostly colluvium or fill materials)

$$\begin{aligned}\phi' &= 25^\circ \\ c' &= 300 \text{ lb/ft.}^2 \\ \gamma &= 125 \text{ lb/ft.}^3\end{aligned}$$

20

(b) for soil materials at more than 20 ft. below ground surface (mostly in-situ soil), and therefore applicable to most slope stability calculations, and any calculations involving an average depth of soil more than 20 ft.

$$\begin{aligned}\phi' &= 25^\circ \\ c' &= 600 \text{ lb/ft.}^2 \\ \gamma &= 125 \text{ lb/ft.}^3\end{aligned}$$

Completely decomposed granite/fill or colluvium of granite origin

(a) for soil materials within the first 20 ft. below ground surface (mostly colluvium or fill material)

$$\begin{aligned}\phi' &= 30^\circ \\ c' &= 300 \text{ lb/ft.}^2 \\ \gamma &= 125 \text{ lb/ft.}^3\end{aligned}$$

30

(b) for soil materials at more than 20 ft. below ground surface (mostly in-situ soil), and therefore applicable to most slope stability calculations, and any calculations involving an average depth of soil more than 20 ft.

$$\begin{aligned}\phi' &= 32\frac{1}{2}^\circ \\ c' &= 500 \text{ lb/ft.}^2 \\ \gamma &= 125 \text{ lb/ft.}^3\end{aligned}$$

Compacted selected backfill (granitic origin)

$$\begin{aligned}\phi' &= 30^\circ \\ c' &= 300 \text{ lb/ft.}^2 \\ \gamma &= 125 \text{ lb/ft.}^3\end{aligned}$$

40

Concrete to soil (backfill & in-situ soil) wall friction
 $\delta = 20^\circ$

Base in-situ concrete to in-situ soil

Decomposed volcanic rock $\phi' = 25^\circ$
Decomposed granite $\phi' = 30^\circ$

Maximum bearing pressure

Fill = 0.5 ton/ft.²
Colluvium = 1.0 ton/ft.²
In-situ soil materials (decomposed volcanic and granite)
= 1.5 ton/ft.² (total building load divided
by 1st floor plan area)
= 3.0 ton/ft.² (maximum local bearing pressure)

10

Factor of Safety

Temporary slope > 1.25 under the worst site conditions envisaged during construction
Permanent slope > 1.5 under the worst site conditions envisaged during the life span of the building
Bearing pressure 3

3. EXISTING SITE CONDITIONS

3.1 General

20

The site (see Fig. 1) is below Kotewall Road and above Babington Path. The building to be constructed has two blocks resting on spread footing foundations. Each is a 12-storey block with 4 carpark decks. The wind load is to be resisted by two large hollow triangular foundations. The lower triangular foundation together with most of the spread footings round it had been completed before the 1972 Po Shan Road landslide. The proposed access road extends from Kotewall Road to the lowest carpark Deck D with a gradient of 1 on 6-8.

At the present time, a large part of the site is still covered by debris carried down during the landslide. Therefore, extensive excavation work is necessary to construct the building foundations at their proposed levels. However, the ground near the northern corner of the lower triangular foundation has been over-excavated during clearance after the landslide, and underpinning might be necessary.

30

3.2 Stability of Existing Slopes

The sloping part of the site extending from Kotewall Road has an average gradient of about 30°, with a slope height of 60-70 ft. The sloping ground to the south-east of the lower triangular foundation has a steeper slope of about 45°, but with a slope height of only 20 ft. The northern corner of this foundation has a depth of 15-20 ft. exposed.

Stability analysis, using Hoek's design charts, indicates that the minimum

Factor of Safety of the above slopes is not less than 1.35 even under the most critical condition when the water table is near the ground surface and for the more conservative circular failure analysis.

3.3 Foundations to be Constructed & Probable Geotechnical Problems

Two types of foundations remain to be constructed for the superstructure:

- (1) the upper hollow triangular foundation with a depth of about 9 ft; each side of the triangle has a total length of 100 ft. and a width of 10 ft.;
- (2) the spread footings with a width of 5-8 ft. and a length of 6-12 ft.

As can be seen from Fig. 2, the bottom levels of most of these foundations are 10-30 ft. below the existing ground level, about half of them on sloping ground. An examination of the most critical section (II'' — II'' on Fig. 5c) through the eastern corner of the upper triangle indicates that the over-all stability of the slope as extended from Kotewall Road would drop to about 1.0 during construction by excavating vertically unsupported faces. (Both Bishop's 'Method of Slices' and Hoek's stability charts give very similar results). 10

The construction of the spread footings requires the excavation of rectangular pits of width 5-8 ft, length 6-12 ft. and depth up to 30 ft. Ground water might be encountered at depths beyond 20 ft. The stability of these pits, especially those along the slope, is thus quite critical.

4. FOUNDATION CONSTRUCTION FOR THE SUPERSTRUCTURE 20

Before any foundation work can be resumed, extensive site excavation is necessary. This is because:

- (1) The bottom levels of most of the unbuilt foundations are from 10-30 ft. below existing ground level.
- (2) The boundaries of the future car-park decks (A, B, C & D) are also below the existing ground level.
- (3) Excavation is necessary for the construction in steeply sloping ground of that part of access road and retaining wall running approximately parallel to and below Kotewall Road.
- (4) Soil investigation reveals that the top 10-20 ft of soil is in a fairly loose state. 30

After completion of the necessary excavation work, the construction of the foundations at the bottom of the slope below Kotewall Road and the upper triangular foundation could start. All this excavation and foundation work must be undertaken in the dry season with adequate surface water drainage. The construction of the rest of the foundation could then follow, preferably also in the dry season.

4.1 Site Formation Plan for Foundation Works

The existing site must be trimmed back to the edge of Kotewall Road, with up to 15 ft. of excavation between Kotewall Road and the south of the lower triangular foundation. The finished foundations of the lower block should be underpinned, wherever necessary. The ground to the north must be backfilled down to the level of the temporary access road, with a maximum gradient of 35°. The proposed finished topography of the site is shown in Fig. 3.

The excavated site will then have a maximum gradient of 35° (approximately 1 vertical on 1½ horizontal) through the eastern corner of the upper triangular foundation. Near the upper western corner, the existing masonry retaining wall can still be used, possibly as a temporary measure. The ground south of (i.e. behind) this wall is partly excavated with an average slope of about 35° extending from Kotewall Road. The ground on the other (i.e. northern) side is excavated to a lower level, starting at about 393 ft. PD (the level of future Deck A) near the wall and then extending downward at a much gentler slope. The sloping part of the ground above the lower block will have a maximum gradient of about 34° and a slope height of 40 ft. 10

With the site thus excavated, further excavation for foundation construction will be minimised. It can also be seen from Fig. 4 that practically no further excavation is necessary to construct car-park decks A, B, C & D. Finally, stability analysis indicates that the slopes are stable during construction if the proper construction sequence is followed, and that long-term stability can be attained by extending some of the foundations into a very hard layer (S.P.T. value circa 200). 20

4.2 Slope Stability during Foundation & Superstructure Construction

After the completion of the site formation work as shown in Fig. 4, it is obvious that the most critical slopes are along Sections II'' — II'' (Fig. 5c), V — V (Fig. 5f), VI — VI (Fig. 5g) and O — O (Fig. 5h), and the backfilled slope below the lower block along Section II — II (Fig. 5b). Hoek's design charts for a circular failure surface have been adopted for estimating the stability. It can be seen that during the dry season, the most appropriate site conditions will be a normal draw-down condition with the tension cracks (if there are any) remaining dry, and a Hw/H ratio (depth of water table to total height of slope) of about 0.5 or at most 0.75 (as the water table recorded in the dry season is from about 20-30 ft. below ground surface). Before and after the construction of the foundations, the Factor of Safety thus obtained from the more conservative circular failure surface analysis for Section II'' — II'' is about 1.4, for Sections V — V and VI — VI is about 1.2, and for the backfilled slope below the lower block along Section II — II is about 1.6. The slope along Section O — O is not much affected by foundation construction, and the Factor of Safety is about 1.7. 30

During the construction of the upper triangular foundation, the most critical position is Section II'' — II'' (Fig. 5c) through the eastern corner and Section V — V on the western one. A similar slope stability analysis indicates that the Factor of Safety drops to about 1.1 and 1.0 respectively if the excavation work for this foundation is to be carried out at the same time with the vertical sides unsupported. 40

The above values indicate that the Factor of Safety is somewhat on the low side

for Sections V — V and VI — VI, and Section II'' — II'' during the construction of the upper triangular foundation. To increase the Factor of Safety for Sections V — V and VI — VI, it is essential that:

- (1) no construction work for the upper triangular foundation should start before the completion of the foundation works for that part of access road below the ground level
- (2) the excavation work for that part of ground on the northern side of the old masonry wall should not start before the completion of work in (1).

As for Section II'' — II'', the Factor of Safety can be increased if the upper triangular foundation is cast in short sections.

10

4.3 Proposed Construction Procedures & Methods

In order to further increase the slope stability during the construction of the upper triangular foundation, it is preferable that those foundations nearest to Kotewall Road should be constructed first, with their bases extending right down to a hard layer (or beyond the potential slip surface, whichever is the deeper) so as to minimise the chance of a large-scale slope failure extending from Kotewall Road.

These foundations include spread footings for columns C54, C55, C56, C57, C58 & C59 above the lower triangular foundation, and footings for columns C23, C25, C28, C30, C33 & C36 above the upper triangular foundation. As these foundations are to be founded at a depth much deeper than that originally designed, the base area can be reduced accordingly, and therefore at a few feet below the finished ground level 6 ft. diameter caissons can be used to replace the spread footings for columns C25 and C33, and 4 ft. diameter ones for the rest. The use of caissons can also minimise the amount of excavation and cater for the presence of boulders. The bottom level of each caisson is from about 30-40 ft. below the finished ground surface. (See Figure 4 for a more detailed description.) The original dimensions of the various spread footings can still be adopted. However, the bottom level of each footing is now not as critical, as the soil immediately beneath it is expected to take a bearing pressure of only $\frac{1}{2}$ — 1 ton/ft.² Therefore these footings are most conveniently founded at about 4 ft. below the finished ground surface.

20

30

The construction of the upper triangular foundation could start immediately after the foundation works nearest to Kotewall Road had been completed. It can be seen that the most critical section is the eastern corner (see Section II'' — II'', Fig. 5c) which requires more than 15 ft. of excavation in some places. As the slope above it is also fairly steep (about 35°), therefore temporary support of some form (e.g. sheetpile) is certainly necessary for that part nearest to Kotewall Road. The construction of the other parts of this upper triangular foundation is less critical because they are on less sloping ground. However, it is still necessary in some parts to excavate more than 15 ft. below the finished ground level, and in most parts more than 10 ft. It is therefore necessary to have the two excavated sides trimmed back at no steeper than 60° (or 45° in case of poor soil conditions) during construction.

40

As the position of the water table is from 20-30 ft. (or more) below the existing

ground surface during the dry season, pumping is most probably not necessary under such conditions.

The construction of all the above foundations must be finished in the dry season. The construction of the rest of the footings is less critical in some of the cases but, if possible, they should also be completed before the wet season.

Since ground water might be encountered during the dry season at depths 20-30 ft. below the existing ground surface, the deeper caissons must be dewatered and excavated in stages, with each stage cased (probably by in-situ concrete rings) before the next is dug.

4.4 Bearing Capacity of Existing Site & Suitability of Finished Foundations 10

The designed bearing capacity for both the spread footings and the two triangular foundations is 3 ton/ft.² Most of the foundations rest on decomposed volcanic rock; the northern corner of the triangular foundation and the spread footings nearby, however, are most probably on decomposed granite.

According to Terzaghi & Peck (1967), the ultimate bearing capacity for an infinitely long isolated footing, being 10 ft. below ground surface and resting on a soil (e.g. decomposed volcanic rock) with average undrained parameters of $c_u = 1200$ lb/ft.², $\phi_u = 10.5^\circ$ and $\gamma = 125$ lb/ft.³ is 6 ton/ft.² This gives a Factor of Safety of 2 against general shear failure. If the corresponding effective stress parameters ($\phi' = 25^\circ$, $c' = 600$ lb/ft.²) were adopted, the Factor of Safety would be increased to 4, and would still be about 3.0 even with the water table near the ground surface. The actual Factor of Safety in the present case, however, must be in excess of 2. This is because 20

- (1) the bearing capacity of a footing of finite length is larger than that in an infinitely long one
 - (2) the present foundations are very closely spaced, and will act more or less like a large raft, thus resulting in an average loading lower than 3.0 ton/ft.² The average load intensity as obtained by dividing the total load by the total floor plan area is only about 1.5 ton/ft.²
- and (3) the bottom levels of most of the spread footings to be constructed are more than 10 ft. below the finished ground surface. 30

In the case of decomposed granite with average effective strength parameters of $\phi' = 32.5^\circ$, $c' = 975$ lb/ft.² and $\gamma = 125$ lb/ft.³, the ultimate bearing capacity would be well in excess of 10 ton/ft.²

It follows that the Factor of Safety against general shear failure should be quite adequate, provided all footings are founded on in-situ materials, thus ensuring that the above design assumptions are fulfilled.

Most of the foundations of the lower block have been completed. These include the lower triangular foundations and the spread footings on the three sides of it. As

they are on more level ground, the original spread footing design can still be adopted. From borehole logs of Boreholes B, 3' and 12, the finished spread footings on the southern side of the triangular foundation should be resting on soil materials with a SPT value of about 50, and therefore should be acceptable. The spread footings on the northern side of the triangular foundation and also its northern corner have been over-excavated. They should be properly underpinned, wherever necessary. Afterwards, the ground in front of the exposed parts should be backfilled to form a well-compacted slope. In most places, the backfilled slope is flatter than 30°, and is therefore quite safe under all conditions.

As for the spread footings on the eastern side, no information concerning soil conditions in this region is so far available. Also bearing in mind that these foundations are very near to the former nullah, and that water flow from above and below the nullah has been observed, some additional boreholes are needed to enable the soil properties to be examined more closely. Wherever necessary, foundations in this region should be underpinned, or completely reconstructed on in-situ materials. 10

5. FOUNDATION CONSTRUCTION FOR ACCESS ROAD

The proposed access road extends from Kotewall Road at 437 ft. PD all the way down to the lowest car-park Deck D at 363 ft. PD. The original design proposals for the supporting foundations before the 1972 Po Shan Road landslide are as follow:

1. The first part of the road (level 437 ft. PD to 425 ft. PD) being above the existing ground level was to be supported on spread footing foundations. 20
2. The second part (level 425 ft. PD to 403 ft. PD) is below the existing ground level and is more or less parallel to Kotewall Road. This part was designed to lie between two retaining walls, the one near to Kotewall Road retaining the soil above and the other supporting the access road.
3. The third and final part (level 403 ft. PD to 363 ft. PD, i.e. car-park Deck D), again being above the existing ground level, was to be supported on spread footing foundations.

Provided that the spread footings, whose dimensions are fairly small, are constructed in an appropriate sequence, the effect of their construction on slope stability would be relatively minor, with the probable exception of those on fairly sloping ground. On the other hand, the part between the retaining walls is critical because: 30

1. a large amount of excavation near and all the way up to Kotewall Road is necessary, the depth of excavation in the most critical section exceeding 30 ft.
- and 2. part of the road is to be supported on the existing masonry retaining wall which suffered some damage during the landslide and requires close inspection after the site formation work.

In order to minimise disturbance of the slope below Kotewall Road and 40

maintain an adequate Factor of Safety against slope failure during construction, the foundation for the second part of the access road which is below existing ground level should be completely re-designed. A reinforced concrete diaphragm wall type of foundation is most suitable for the present purpose. This could be constructed by firstly sinking 4 ft. diameter hand-dug caissons (or machine-bored holes in places where no large boulders are encountered) at about 8 ft. centres. The soil in between could then be excavated down to about 5 ft. below the level of the proposed access road so as to form a continuous reinforced concrete retaining wall above this level. In order to increase the stiffness and stability of this wall, another row of 4 ft. diameter caissons could also be constructed in front (i.e. within the access road) at also about 8 ft. centres, each being tied to the corresponding caissons in the wall. The centreline of the forward row of caissons would be at about 10 ft. from that of the wall. By extending the caissons deeply into the hard layer or beyond the potential slip surface, enough lateral resistance could be generated to resist the soil pressure from the slope below Kotewall Road. This is to be preferred to the use of permanent rock anchors which would be very expensive on the present site in which the rock level is certainly quite far away from the ground surface. 10

It can be seen from Fig. 4 that the affected section of road is from 425 ft. PD to 403 ft. PD. A more critical section, from 420 ft. PD to 405 ft. PD where the height of the wall is more than 10 ft., has a length of about 90 ft. The most critical section is from 412 ft. PD to 408 ft. PD, where the wall height is more than 20 ft., and is about 25 ft. long. The depth of caissons required should therefore increase with the increase in the height of the wall. 20

However, in determining the exact depth of caissons required, the over-all slope stability of the slope below Kotewall Road must also be taken into consideration as well as the need to extend the caissons beyond the potential slip surface (the most critical one has been determined by Bishop's method of slices). For the most critical section, these caissons have to extend about 60 ft. below the finished ground surface. The proposed depth of penetration along the whole section is shown in Fig. 7b.

With the deep caissons thus constructed, the earth pressure on the lower retaining wall would be much relieved, and the original intention of using the existing masonry wall might be feasible. If shown necessary by close inspection after site formation, this wall should then be underpinned. 30

It should also be noted that a foundation of this nature will not only increase the long-term stability of both the access road it supports and that part of Kotewall Road above it, but will also increase the safety of the building below it during and after construction.

As for the foundations supporting the third (i.e. final) part of the access road, the original design proposal of using spread footing foundations could still be adopted because these are all on fairly level ground and the average loading is only about 1.8 ton/ft.² However, the foundations supporting the first part should certainly go deeper than originally proposed because they are on more sloping ground. As a safeguard against any possible slope failure or lateral soil movement, these foundations should be supported on 4 ft. diameter reinforced concrete caissons extending beneath the potential slip surface (the most critical one again determined by Bishop's method 40

Supreme Court of Hong Kong
No. referred to in the agreed bundle 100
Report of S.W.K. & P.
8/74
(Contd.)

of slices). Alternatively, the caissons could stop at a soil layer with an SPT value of about 200 as no slip surface is likely to pass through such a material. On the average these caissons have to extend 20-30 ft. below the finished ground surface.

The foundation works for the first and second part of the access road (i.e. from level 437 ft. PD to 403 ft. PD) must also be completed in the dry season and preferably before the construction of the building superstructure.

6. LONG-TERM STABILITY OF COMPLETED SITE

If there is to be no further cutting or filling of the site after finishing the foundation construction, the long-term stability of the slope must take into consideration the adverse site conditions during the wet season. Since the foundations along the slope near the Deck A car-park boundary are all supported by caissons going deeply into stable soil, only the slopes above that boundary (i.e. above 393 ft. PD) need be considered. Near the eastern corner of the upper triangular foundation, the most critical slope is through section II'' — II'' (see Fig. 5c). Assuming a normal draw-down condition with the water table rising to the ground surface and any tension cracks filled with water, Hoek's stability charts give a Factor of Safety of about 1.5 even for the more conservative circular failure analysis. 10

The western slope is retained by the reinforced concrete diaphragm wall. As this wall is proposed to extend into a deep hard layer, no slip surface could pass below it.

Under the same adverse site conditions as mentioned above, the Factor of Safety of the sloping part of the ground above the lower block is about 1.6 and that of the back-filled slope below the lower block along Section II — II is about 1.5. 20

Because of the deep caissons and reinforced concrete diaphragm wall crossing the slope, no slip surface could extend from Kotewall Road down to the lower block.

7. SUMMARY OF WORKING SCHEDULE

In order to maintain the stability of the site during and after construction, foundations construction should be carried out in the following sequence:

Stage 1 — Site Formation (Part I)

The finished topography of the site after Part I of the site formation work is as shown in Fig. 6 and the various cross-sections in Fig. 5. Excavation should start from the edge of the footpath of Kotewall Road and the existing masonry retaining wall on the western half of the site be carefully examined after part of the soil behind it had been removed. If necessary, this wall should be temporarily underpinned in order to increase the stability of that part of the site. The soil in front of (i.e. north of) this wall should not be excavated before the foundation works for that part of access road had been completed. 30

The exposed parts of the finished foundations for the lower block should be properly underpinned wherever necessary. The ground to the north must be back-filled, down to the temporary access road, the back-filling being compacted in layers.

If necessary, this underpinning and back-filling could be left to later stages provided that they are done during the dry season and before the construction of the super-structure.

Stage 2 — Construction of Foundations for the Access Road

This includes construction of the following two parts of access road (see Figs. 7a-e).

- (1) 4 ft. diameter reinforced concrete caissons for columns C1, C2 and the four pairs of columns C3 & C4, which support the first part of the access road from level 437 ft. PD to 425 ft. PD
- and (2) the reinforced concrete diaphragm wall type foundation for the second part from 425 ft. PD to 403 ft. PD. 10

These two sections of foundation works could be built at the same time.

As the depth of penetration of the caissons for the first part is only from 20 ft. to 30 ft. below the ground surface, ground water might be largely absent during excavation. Bearing also in mind that the spacing between any two adjacent caissons is usually more than 10 ft., excavation for most of the caissons could start at the same time, provided that no excavation for any two caissons at less than 10 ft. spacing is allowed to proceed at the same time.

The following sequence should be followed in constructing the foundations for the second part of the access road from level 425 ft. PD to 403 ft. PD. 20

- (1) Sinking of 4 ft. diameter caissons for the wall — these should be at 8 ft. centres for that section of access road from level 420 ft. PD to 406 ft. PD, and at about 10 ft. centres elsewhere. The depth of penetration required for each caisson is indicated on Fig. 7a.
- (2) Excavating and concreting of the space between the caissons to about 5 ft. below the proposed access road level — the bottom $1\frac{1}{2}$ ft. should be filled with 'no fines' concrete in order to provide for drainage of the ground water behind the wall. Thus for the portion of access road from level 425 ft. PD to 403 ft. PD there would be a continuous reinforced concrete diaphragm wall extending to $3\frac{1}{2}$ ft. below the proposed access road level. The construction work for both (1) and (2) could proceed from both ends, but no excavation for any two caissons at less than 10 ft. spacing should be allowed to proceed at the same time. 30
- (3) Excavation of the soil in front of the reinforced concrete diaphragm wall to the proposed access road level, sinking of another row of 4 ft. diameter caissons in front (i.e. north) of the first row and construction of tie beams connecting the corresponding caissons of the two rows. (The above operations should be done in sections about 10 ft. long and again could proceed from both ends.) The second row of caissons should also be at about 8 ft. centres and each should be founded at the same level as its 40

counter-part in the first row. This second row is for that section of access road from level 419 ft. PD to 403 ft. PD, the distance between the centrelines of these two rows of caissons being about 10 ft.

- (4) Excavation of soil to the proposed access road level for the sections of access road from level 425 ft. PD to 419 ft. PD.
- (5) Sinking of five more 4 ft. diameter caissons on the other (i.e. north) side of the access road for that section from level 425 ft. PD to 420 ft. PD. These could then be joined to the respective caissons on the other side of the road by means of tie beams serving as a support for that section of road.

Stage 3 — Site Formation (Part II)

10

This concerns the ground in front (i.e. north) of the old masonry retaining wall. The finished topography of the site after Parts I & II of the site formation work is as shown in Fig. 8. This part of the site formation work is essential if construction of the upper triangular foundation is to be carried out under safe working conditions. If necessary, this stage of work could be done at the same time as or even later than stage 4.

Stage 4 — Construction of Foundations on Steeper Ground

The proposed construction sequence for caissons supporting columns C23, C25, C28, C30, C33 & C36 above the upper triangular foundation and those supporting columns C54, C55, C56, C57, C58 & C59 above the lower triangular foundation is shown in Fig. 9. Depending on the actual site conditions, this sequence might have to be altered. However, no excavation for any caisson should start before thorough setting of the concrete in the adjacent ones.

20

In order to cater for the presence of boulders in the area, 6 ft. diameter hand-dug caissons could be used for supporting columns C25 & C33, and 4 ft. diameter ones for the rest. These caissons should also be properly reinforced. Examination of the various cross-sections through the site indicates that if these caissons can be extended about 30-40 ft. below the finished ground level, a general slip surface extending from Kotewall Road down to the bottom surface of the lower block can be avoided. (See also Figure 4 for a more detailed description.) However, the exact depth of penetration should be determined on the site after careful inspection of the actual soil conditions, or in-situ soil testing, if found necessary.

30

Water might be encountered 20-30 ft. below the existing ground surface rendering continuous pumping necessary. For excavation below the water-bearing stratum, some form of lining or casing would also be necessary.

Stage 5 — Construction of Upper Triangular Foundation

The proposed construction sequence for this foundation is indicated on Fig. 10. Wherever possible, the excavation work should be carried out in short sections, in any case not more than 20-25 ft. long. Also excavation of each section should not start until any adjacent concrete has set. For the eastern corner above which where

40

Supreme Court of Hong Kong
No. referred to in the agreed bundle 100
Report of S.W.K. & P. 8/74
(Contd.)

the ground is fairly steep (about 35°), temporary supports (e.g. sheetpiles) would be more convenient as well as being necessary, especially for the part nearest to Kotewall Road. The alternative would be extensive cutting of the unsupported side to a temporary slope of say 45° — 60°. After the concrete has set, any back-filling should be well compacted in layers.

Any soft patches of soil at the bottom of the foundation should be removed and replaced with mass concrete or well compacted selected soil.

Stage 6 — Construction of Rest of Spread Footings

As the remaining footings are all on flatter or practically level ground, the original design could still be adopted, the construction sequence being as shown in Fig. 11. Phases 1 and 2 must be carried out in the dry season as the underside of all these footings is 10-15 ft. below the finished ground surface. Footings to be constructed in Phase 3 are less critical extending less than 10 ft. below the finished ground surface. 10

8. GENERAL CONCLUSIONS & RECOMMENDATIONS

1. In order to maintain an adequate factor safety of the present site and the surrounding area during and after foundation construction, the foundation works must be carried out in the sequence outlined in Chapter 7, with some of the original design proposals being suitably modified. The more important alterations include: 20
 - (a) supporting on deep caissons the spread footing foundations at the end of the slope extending from Kotewall Road
 - (b) replacing the proposed retaining wall for that section of access road from level 425 ft. PD to 403 ft. PD by a continuous reinforced concrete diaphragm walland (c) supporting the spread footing foundations on the steeper ground in the first part of the access road from 437 ft. PD to 425 ft. PD on caissons.
2. Although the Factor of Safety against any slope failure, according to existing soil data, is quite adequate, the actual soil conditions should be closely inspected during the progress of the foundation works because of possible local variation in soil properties. In case of doubtful soil layers, more undisturbed samples should be taken for testing or in-situ testing should be done. The proposed foundation design could then be modified accordingly. 30
3. If the foundation works along the sloping ground surface cannot be completed in the dry season, temporary measures must be adopted to protect the slopes. These include covering the sloping ground surface with plastic sheets or tarpaulins and constructing temporary rain-water channels. Temporary surface channels should in any case be installed during foun- 40

dation construction to cater for any unexpected heavy rainfall.

4. The nullah originally on the eastern side of the present site must be properly repaired before the next dry season so as to provide an efficient drainage system.
 5. Depending upon actual site conditions, horizontal drainage holes might be necessary along the slope. These would relieve the hydrostatic water pressure indicated by previously observed water seepage below the former nullah on the eastern side of the site.
 6. Owing to possible local variation of the soil properties, the precise foundation depth must be decided on the site by an experienced soils engineer. The designed depth as proposed in the present report might have to be altered accordingly to suit local soil conditions. 10
 7. To maintain long-term stability of the site, all the sloping soil surfaces above and below the finished structure should be well protected from possible erosion by heavy rainstorms. This could be done by (a) covering the soil surfaces with turf or chunam and (b) providing surface-water channels at vertical intervals not exceeding 25 ft. Whether turf or chunam is to be used can only be decided during the site formation work when surface soil conditions can be more carefully inspected.
- If proved necessary by the soil conditions revealed, more standpipes could be installed around this area to monitor ground-water levels during and after construction. 20

Supreme
Court of
Hong Kong

**COPY LETTER FROM DEFENDANT
TO SCOTT WILSON KIRKPATRICK & PARTNERS**

No. referred
to in the
agreed
bundle
101
Copy letter
Defendant to
S.W.K. & P.
4/9/74

Your Ref: 73814
Scott Wilson Kirkpatrick & Partners,
Consulting Engineers,
Star House,
Salisbury Road,
Kowloon.

September 4, 1974.

Dear Sirs,

10

No. 12 Babington Path

With reference to the conversation we had with your Dr. Wong, we understand that the budget limit has been reached and you will require our authorization to exceed the budget as may become necessary in further consultation. We hereby convey our authorization.

Yours faithfully,
T. H. Wang
Director

Supreme
Court of
Hong Kong

**COPY LETTER FROM C. H. DUFF
TO PUBLIC WORKS DEPARTMENT**

No. referred
to in the
agreed
bundle
102
Copy letter
C.H. Duff
to Public
Works
Department
27/11/74

The Principal Government Highways Engineer,
Public Works Department,
Murray Building,
Garden Road,
Hong Kong.

27th November, 1974.

Dear Sir,

I.L. 8171 — Babington Path

This letter briefly outlines the situation at the above site and confirm my request that the nullah along its eastern boundary be rebuilt as soon as possible. It follows my conversation with Mr. J. Duncan at whose suggestion this letter is written. 10

At the time of the Po Shan Road disaster the lower block of the two proposed buildings on this site was under construction. The landslide deeply covered the western half of the site with spoil from Po Shan Road and debris from Kotewall Court and so damaged the now R.C.C. work that it had to be demolished except for the main foundation raft and a number of footings.

The site was occupied by the P.W.D. for about five months, during which time it was not possible for my client to proceed with work of any kind. In October 1972, I wrote to the Director of Public Works requesting permission to re occupy the site, to clear it of debris and to proceed with the project. I also requested that the Public Works Department rebuild the nullah along the eastern boundary of the site which had been completely destroyed. 20

On November 8, 1972, I received a reply from the Building Authority, a photocopy of which is enclosed for your reference.

Subsequently the site was cleared, temporary surface drains formed and surface protection applied where necessary to ensure stability during the next wet season.

Since then a comprehensive site investigation has been carried out and the whole Scheme re-examined in relation to the stability of the lot and adjoining land. This program, upon which Messrs. Scott Wilson Kirkpatrick & Partners have been retained as Consulting Engineers, has now reached a stage where commencement of work is in immediate prospect. 30

It is essential that all foundation work and retaining walls be completed during the present dry season and for this reason your assistance in expediting the reconstruction of the nullah along the eastern boundary, referred to in the last sentence of paragraph 6 of the enclosed copy of letter from the Building Authority, will be greatly appreciated. I might mention that our Consulting Engineers have stated in their report that they regard the restoration of this nullah as essential to the preservation of the stability of the site.

Yours faithfully,
Charles H. Duff 40

Supreme
Court of
Hong Kong

**LETTER FROM HIGHWAYS OFFICE
TO C. H. DUFF**

No. referred
to in the
agreed
bundle
104
Letter
Highways
Office to
C.H. Duff
11/12/74

11th December, 1974.

Mr. Charles H. Duff,
Chartered Civil Engineer & Authorized Architect,
2013, Connaught Centre,
Hong Kong.

Dear Sir,

I.L. 8171 — Babington Path

Your letter addressed to the Principal Government Highway Engineer dated 27th November, 1974 has been referred to me for reply. 10

Subsequent to the landslide disaster in 1972, stormwater drains in Kotewall Road and Po Shan Road above I.L. 8171 were reconstructed and directed to the nullah on the western side of your lot. No major drains are connected to the nullah to the east of the lot. Site inspection reveals that the upper section of the latter has been blocked up and is not in use. It appears that it is not necessary to reconstruct the upper section of the nullah now and any surface drainage to convey the local runoff should be carried out in conjunction with the construction of your access road (presumably from Kotewall Road) and the future development of the former I.L. 1729 (where a building collapsed in 1972). The lower section of the nullah is in use and needs no reconstruction apart from some minor repair which will be carried out by this Division shortly. 20

Yours faithfully,
(Sd.) Chen Shao-chi
Ag. Chief Engineer, Highways/H.K.

**NOTES ON REPORT —
(MEETING WITH MR. DUFF AND DR. WONG)**

No. referred
to in the
agreed
bundle
243a
Notes on
Report —
Building
Authority
24/1/75

12 Babington Path

General:

This report is concerned with the stability of the slopes in this site and the safe provision of foundations for 2/12 storey buildings. Access is to be provided from Kotewall Road above the site. There are problems concerning in the safety of the hillside on which the access is sited in a permit area.

Soil and Geological Properties:

Several bore-holes have been carried out. However, the details from these bore-holes have not been related to the sections by drawings. Neither has Scott Wilson mentioned how much value they place on the data obtained by 3 different contractors. 4 triaxial tests have been undertaken by the University in May 1973, but Scott Wilson had not commented on how these results bear inspection against the material obtained at particular locations on site. 10

Scott Wilson does mention that at no point in the investigation was fresh rock found even in the deepest bore-hole at 80' depth. They recommend certain parameters for use within the different layers. These parameters are in places subjected to query since they would appear to cover unconsolidated fill with C values which are questionable. 20

Requirements:

It is suggested that a drawing is prepared showing the site within its boundary and the area under Crown permit. On this drawing is plotted the section lines taken. Sections are produced and geological bore-holes shown. The various materials encountered in the bore-hole should be graded by Messrs. Scott Wilson. Scott Wilson should undertake to state how much reliance they place on the triaxial test done. Scott Wilson should further consider on these sections the possible phreatic surface.

Proposal:

The proposal can be divided into three separate sections.

- (a) The stabilisation of the slope reaching from Kotewall Road down to the level of the site and including the access. 30
- (b) The provision of the major foundations at formation level within the site.
- (c) The provision of spread footings within the southern slope.

Taking these matters separately it is clear that item (a) should receive immediate attention. It can only be carried out safely in the dry weather and there is cause for concern for the stability of this slope. Initial submission should therefore be related to item (a) only.

Requirements concerning the formation of the slope between Kotewall Road and the site:

No. referred
to in the
agreed
bundle
243a
Notes on
Report —
Building
Authority
24/1/75
(Contd.)

Contrary to the proposal in the report which recommends that trimming of the southern slope is the first step, I suggest that the construction of caissons should take place before anything else. These will tend to act as groins and through arching help to stabilise the whole of this hillside. There is, however, one difficulty which will require further checking i.e. I believe there may be conflict with the Commission of Enquiry report that no foundations in the area should be provided unless they bear on rock. Whether this is or isn't the case the question of caisson will require further study with respect to the type of soil. And it is for this reason that I feel there is need to have a layered sequence of soil strata shown against the sections. I will, of course, also have to read the Commission of Enquiry report again and see just how definite they are on this point. Other points of concern are those who relating water table and the indication of where the phreatic surface is expected to lie on each section is very important. There must be some assessment of the restriction provided by caissons or the walls above to the natural seepage to the soil. It is this water which makes this sort of slope unstable. Scott Wilson will need to be queried very thoroughly on this. 10

Other matters:

I think at this point — there is little reason to examine other matters since the total problem faced by this job lies in 2 factors. 20

- (a) The actual situation faced on the site which we hope to clarify with the sections and confirmations from Scott Wilson.
- (b) The question as to whether caisson foundations or any foundations for that matter, can be provided without reaching to rock.

(Sd.) K. C. Brian-Boys
C.C.E./B.O.O.
24.1.75

Supreme
Court of
Hong Kong

**COPY LETTER FROM YIM YAN
TO PUBLIC WORKS DEPARTMENT**

No. referred
to in the
agreed
bundle
105
Copy letter
from
Yim Yan
to Public
Works
Department
4/3/75

The Officer,
Office of the Building Authority,
Public Works Department,
Murray Building,
8th, 9th & 10th Floors,
Garden Road,
Hong Kong.

March 4, 1975.

Dear Sir,

**Re: "University Heights" at Kotewall Road,
I.L. 8171, Hong Kong.**

10

I have purchased, by instalments, a flat in the "University Heights" at Kotewall Road, I.L. 8171, Hong Kong from the Chinachem Group of 1001-1003, Bank of Canton Building, 6, Des Voeux Road, Central, Hong Kong on the date of 2 February, 1971.

However, owing to the Kotewall Road landslide in June 1972, the development of the above-mentioned project has been suspended since. At present, the Government has completed all the reinforced-works on the slopes but the said project is still not resumed. On several occasions, I have approached the above-named Chinachem Group for information as when the construction work will be resumed. To my utmost regret, no solid and definite date is given regarding this matter. I have no way but have to turn to your department and hoping to have assistance on the following:

1. Because of the landslide in June 1972 and ever since, has the Government ever imposed any restrictions so as not to permit the developer and architect to resuming the said project?
2. Since the June 1972 landslide, the Government might have put additional restrictions on the development of the said project so as to safeguard the stability of all land adjoining this site. Has the developer ever submitted any plan or taking any measures which satisfy your office so as to be permitted to resume the construction of the said project? If yes, when was this plan submitted to your office?
3. Has the developer taken any active measures from your or any other governmental department(s) to seek permission to resume construction work on this project? Or whether the developer has informed your department that they have given up this project or postponed the development to no definite date.

I earnestly hope you will clarify the above queries in your earliest convenience.

Thanking you in anticipation.

Yours faithfully,
YIM YAN

40

Supreme
Court of
Hong Kong

**COPY LETTER FROM PUBLIC WORKS DEPARTMENT
TO YIM YAN**

No. referred
to in the
agreed
bundle
106
Copy letter
from Public
Works
Dept. to
Yim Yan
13/3/75

13th March, 1975.

Mr. Yim Yan,
Room 602,
Entertainment Building,
Hong Kong.

Dear Sir,

Kotewall Road — I.L. 8171

With reference to your letter dated 4th March, 1975, you are advised of the following:— 10

1. This office has informed the architect for this project that before consent to resume works will be given, further plans showing detailed proposals for safeguarding the stability of all land adjoining this site should be submitted and approved by this office;
2. So far, the additional plans required have not been submitted;
3. This office has not been informed by the developer that he has given up this project.

Yours faithfully,
(Sd.) M. Edwards
pro Building Authority.

20

Supreme
Court of
Hong Kong

**COPY LETTER FROM DEFENDANT
TO SCOTT WILSON KIRKPATRICK & PARTNERS**

No. referred
to in the
agreed
bundle
107
Copy letter
Defendant to
S.W.K. & P.
20/3/75

The Manager,
Scott Wilson Kirkpatrick & Co., Ltd.,
Star House,
Kowloon.

20th March, 1975.

Dear Sirs,

We understand that there has been large changes of staff in your organization since September 1973 when we appointed your goodselves to prepare a soil stability report on 12 Babington Path. 10

The B.O.O. wants additional requirements for this report as we wish to go ahead at full speed with the development of this site and your immediate attention to the matter of the additional papers would be much appreciated.

We look forward to hearing from you soon.

Yours faithfully,

John Cooper
Property Manager

Supreme
Court of
Hong Kong

**LETTER FROM SCOTT WILSON KIRKPATRICK & PARTNERS
TO DEFENDANT**

No. referred
to in the
agreed
bundle
108
Letter
S.W.K. & P.
to Defendant
26/3/75

BY HAND
Chinachem Group
1001-3 Bank of Canton Building
6 Des Voeux Road Central
Hong Kong

26th March, 1975

Dear Sirs,

12 Babington Path

10

We refer to your letter dated 20th March 1975 and the meeting with Mr. Duff on 24th March 1975.

2. Subsequent to the receipt of the plan and cross sections on 20th March 1975 from you, we are now proceeding with the work for this project as scheduled, and we anticipate that the additional information requested by B.O.O. could be finalised in two to three weeks' time.

3. Enclosed please also find six additional copies of our report on '12 Babington Path' as requested (telephone conversation J. Cooper/H.Y. Wong on 24th March 1975 refers).

Yours faithfully,
SCOTT WILSON KIRKPATRICK & PARTNERS

20

Supreme
Court of
Hong Kong

**COPY LETTER FROM FORD, KWAN & CO.
TO PUBLIC WORKS DEPARTMENT**

No. referred
to in the
agreed
bundle
109
Copy letter
from Ford,
Kwan & Co.
to Public
Works
Department
4/4/75

The Building Authority,
Public Works Department,
Hong Kong.

4th April, 1975

Our ref: GSF:S

Dear Sir,

**Re: Inland Lot No. 8171 Flats B2 on the 6th floor
& B5 on the 8th floor of University Heights**

10

We act for the purchasers of the above premises Mr. Man Chiu Tong and Mrs. Wong Lai Ying. Our clients entered into an agreement for sale and purchase of the said properties on the 25th March, 1971, completion to take place after the building had been completed and occupation certificate issued. Since that date, there occurred the tragic landslide in Kotewall Road and building operations were stopped.

We should be glad if you would kindly let us know at your earliest convenience whether the restriction on the erection of buildings on this lot has now been lifted and if so, whether plans and specifications for the proposed new building have been submitted to you for approval.

20

Yours faithfully,

Supreme
Court of
Hong Kong

**COPY LETTER FROM PUBLIC WORKS DEPARTMENT
TO FORD, KWAN & CO.**

14 April 1975

No. referred
to in the
agreed
bundle
110
Copy letter
from Public
Works
Department
to Ford,
Kwan & Co.
14/4/75

Ford, Kwan & Co.,
Chiu Lung Building,
6th floor,
15 Chiu Lung Street,
Hong Kong

Dear Sirs,

12 Babington Path & Kotewall Road — I.L. 8171

10

1. I refer to your letter dated 4th April, 1975.
2. Approval of building plans and consent for commencement of building works were issued as long ago as 1970 and 1972 respectively.
3. Work was suspended at the time of the rainstorm of June, 1972. Earlier consent to commence building works has now lapsed. Before consent may be renewed, it will be necessary for the authorised person to submit details of the methods to be employed to safeguard the stability of all adjoining land. The authorised person was aware of this requirement but further information has not been forthcoming in this matter.

Yours faithfully,
(Sd.) M. Edwards
pro Building Authority

20

Supreme
Court of
Hong Kong

**COPY LETTER FROM FORD, KWAN & CO.
TO DEFENDANT**

No. referred
to in the
agreed
bundle
111
Copy letter
from Ford,
Kwan & Co.
to Defendant
23/4/75

Hong Kong, 23rd April, 1975.

M/s. Chinachem Investment Company Limited,
No. 9 Ice House Street,
Room 314,
Hong Kong.

Dear Sirs,

**Re: Apartment B2 on 6th floor & Car Parking Space No. 18 on
Deck D of University Heights & Apartment B5 on 8th floor
& Car Parking Space No. 32 on Deck D of University Heights**

10

We have been consulted by our clients Madam Wong Lai Ying and Mr. Man Chiu Tong in regard to the above premises.

Our clients informed us that on the 20th March, 1971, they entered into an Agreement for Sale and Purchase of the above premises from you and that full purchase prices have been paid to you. Under the said Agreement, you are to complete the said building within 18 months from the date of Agreement or not exceeding in any event 365 days in the aggregate as shall appear to the architect to be reasonable subject to certain exceptions as in the said Agreement sub-section 4.

In June 1972, there was a terrific landslide in Kotewall Road which prevented any building operation on the above premises. This prohibition was removed as long ago as 1970 and you were informed of this. We enclose herewith a copy letter from the Building Authority which speaks for itself. Up to now, you have not yet complied with the requirements contained in this letter nor have you sent in plans for approval and unless this is done forthwith, our clients will take steps to enforce you to comply with the Agreement and put in plans for approval and commence building operations forthwith, failing which our clients will apply to court for an order for specific performance and damages without further notice.

20

Yours faithfully,

Supreme
Court of
Hong Kong

**COPY LETTER FROM DEFENDANT
TO SCOTT WILSON KIRKPATRICK & PARTNERS**

24th April, 1975.

No. referred
to in the
agreed
bundle
112
Copy letter
Defendant to
S.W.K. & P.
24/4/75

The Manager,
Scott Wilson Kirkpatrick & Co., Ltd.,
Star House,
Kowloon.

Attention: Mr. S. G. Elliott

Dear Sirs,

**Re: 12 Babington Path
Your Ref: 73814**

10

We received a strong letter from a Solicitor to complete the building a flat of which they purchased before the great slide. Would you please let us know when the jobs could be re-commenced?

We have been unable to move since September 1973 to the present, mid' 75, because we have not received anything definite from your good selves. What can we have to reply to our clients in this situation?

We urge your immediate action on this matter before further action is taken against us and hope to hear from you on this by return mail.

Yours faithfully,
T. H. Wang
Director

20

Supreme
Court of
Hong Kong

**COPY LETTER FROM DEFENDANT
TO FORD, KWAN & CO.**

No. referred
to in the
agreed
bundle
113
Copy letter
from
Defendant
to Ford,
Kwan & Co.
25/4/75

25th April, 1975.

Ford, Kwan & Co.,
6th floor,
Chiu Lung Building,
Hong Kong.

Dear Sirs,

We refer to your letter of 23rd April and wish to inform you that we have pursued the matter of construction on site I.L. 8171 since the landslide of June 1972 with due diligence which entailed our engaging a prominent firm of consulting engineers, Scott, Wilson and Kirkpatrick, and conducting extensive negotiation with Mr. B. Boyce of the P.W.D. Building Ordinance Office in an effort to complete the said project at an early date. 10

Please rest assured that we are doing everything in our power to expedite the matter.

Yours faithfully,

John Cooper
Property Manager

Supreme
Court of
Hong Kong

**LETTER FROM SCOTT WILSON KIRKPATRICK & PARTNERS
TO DEFENDANT**

No. referred
to in the
agreed
bundle
114
Letter
S.W.K. & P.
to Defendant
25/4/75

Chinachem Group
1001-3 Bank of Canton Building
6 Des Voeux Road Central
Hong Kong

25th April, 1975

Dear Sirs,

12 Babington Path

Thank you for your letter of 24th April 1975.

10

2. As you are aware, Mr. Elliott is at present in Bangkok and is expected to return to Hong Kong on 4th May 1975. Mr. Elliott has been sent a copy of your letter. A draft addendum to our August 1974 report has already been prepared to cover B.O.O.'s additional requirements. We anticipate that this addendum will be sent to you shortly after Mr. Elliott's return.

Yours faithfully,
SCOTT WILSON KIRKPATRICK & PARTNERS

Supreme
Court of
Hong Kong

**LETTER FROM SCOTT WILSON KIRKPATRICK & PARTNERS
TO DEFENDANT**

No. referred
to in the
agreed
bundle
115
Letter
S.W.K. & P.
to Defendant
7/5/75

BY HAND

7th May, 1975

**Chinachem Group
1001-3 Bank of Canton Building
6 Des Voeux Road Central
Hong Kong**

Attention: Mr. John Cooper

Dear Sirs,

10

12 Babington Path

As requested, enclosed please find six copies of our report on "12 Babington Path". Please note that this is an addendum to our August 1974 report (which you have already submitted to BOO last year) and has been prepared to cover BOO's additional requirements.

Yours faithfully,
SCOTT WILSON KIRKPATRICK & PARTNERS

Supreme
Court of
Hong Kong

**COPY LETTER FROM C. H. DUFF
TO BUILDING AUTHORITY**

No. referred
to in the
agreed
bundle
116
Copy letter
C.H. Duff
to Building
Authority
(excluding
copy
reports
mentioned
therein)
8/5/75

**The Building Authority,
Public Works Department,
Murray Building,
Garden Road,
Hong Kong.**

8th May, 1975.

Dear Sir,

10

12 Babington Path, I.L. 8171

Further to my telephone conversation with Mr. Brian Boys, I send herewith, as requested, two copies of the report by Scott Wilson Kirkpatrick & Partners dated August 1974 and two copies of their addendum report dated April 1975.

Yours faithfully,
Charles H. Duff

Supreme
Court of
Hong Kong

**LETTER SCOTT WILSON KIRKPATRICK & PARTNERS
TO DEFENDANT**

No. referred
to in the
agreed
bundle
117
Letter
S.W.K. & P.
to Defendant
12/5/75

BY HAND

12th May, 1975

Chinachem Group
1001-3 Bank of Canton Building
6 Des Voeux Road Central
Hong Kong

Dear Sirs,

12 Babington Path

10

We revert to your letters of 20th March and 24th April and confirm having submitted the addendum report on 7th May under cover of our letter of that date.

2. Whilst agreeing that there have been staff changes on our side since the start of this project, we explained in a recent telephone conversation (Cooper/Elliott) that we could not accept full or even the major responsibility for the delays that have occurred. Moreover, Dr. Wong Hong-yau, who prepared both the original and addendum reports, has been actively responsible for this work since May 1974 and had been consulted on it even before then whilst Mr. Elliott's involvement dates from September 1973.

3. Finally we wish to draw your attention to our account no. 1 (for \$25,800) submitted on 3rd December 1974 and still outstanding. We now take the opportunity of submitting our account no. 2 and should be grateful if both could now be settled promptly. Account no. 2 is submitted in accordance with your letter of 4th September 1974. 20

Yours faithfully,
SCOTT WILSON KIRKPATRICK & PARTNERS

Supreme
Court of
Hong Kong

No. referred
to in the
agreed
bundle
119
Addendum
report
S.W.K. & P.
6/75

**ADDENDUM REPORT
ON
12 BABINGTON PATH
APRIL 1975
(AMENDED JUNE 1975)**

Consulting Engineers
SCOTT WILSON KIRKPATRICK & PARTNERS
Star House
Salisbury Road
Hong Kong

CONTENTS

No. referred
to in the
agreed
bundle
119
Addendum
report
S.W.K. & P.
6/75
(Contd.)

1. INTRODUCTION
2. DETAILED SUBSOIL CONDITIONS
3. SLOPE STABILITY CALCULATIONS
4. DESIGN OF RETAINING STRUCTURE FOR ACCESS ROAD
 - 4.1 Over-all Stability
 - 4.2 Deflection & Stresses Induced in Retaining Structure
5. REFERENCES

APPENDIX I DETAILED BOREHOLE LOGS & GROUND CONDITIONS

10

APPENDIX II SLOPE STABILITY CALCULATIONS

APPENDIX III RETAINING STRUCTURE FOR ACCESS ROAD:
GENERAL ARRANGEMENT

APPENDIX IV RETAINING STRUCTURE FOR ACCESS ROAD:
CALCULATION OF OVER-ALL STABILITY &
INTERSLICE FORCES

APPENDIX V RETAINING STRUCTURE FOR ACCESS ROAD:
DESIGN OF STRUCTURAL MEMBERS

APPENDIX VI RECORDS OF WATER LEVEL READINGS & FURTHER
TRIAXIAL SOIL TEST RESULTS

20

1. INTRODUCTION

In our first report in August 1974 on '12 Babington Path', stability conditions of the site and the surrounding area were considered during the various stages of construction, and proposals were made accordingly concerning the revised design of the retaining structures and some of the foundations. Following further discussion with the Building Authority, the Client and the Architect, it was finally agreed that Scott Wilson Kirkpatrick & Partners (SWKP) should provide additional information concerning:—

- (a) detailed subsoil conditions as indicated by those boreholes that had been logged by SWKP, in addition to those logged by the respective contractors, 10
- (b) cross-sections of the site and the surrounding area with the boundaries between the various soil layers more clearly defined so as to justify more conclusively the soil strength parameters adopted in design,
- (c) more detailed slope stability calculations, taking also into account the adverse ground-water condition that might be envisaged during the wet season,
- (d) supporting calculations for the proposed caisson-type retaining structure including in particular:
 - (i) the lateral earth force
 - (ii) the general deflected profile 20
 - (iii) the forces transmitted to the underlying soil strata.

The present report is therefore essentially an addendum to the previous one, and should be read in conjunction with it.

2. DETAILED SUBSOIL CONDITIONS

There are two major series of ground investigation work, the first of which was performed before and the second after the 1972 landslide (see also Fig. I-1); only those boreholes in the second series have been logged by SWKP. The detailed borehole logs for sections O-O, II-II, II''-II'', IV-IV, V-V & VI-VI are shown in Figs. I-2a, b, c, d, e & f respectively in Appendix I. From these borehole logs, the approximate boundaries between the various soil strata and the position of the ground-water table in the dry season (both series of site investigation work having been performed during that period) can be determined, as indicated in Figs. I-3 a — d in Appendix I, which also show the positions of the various existing and future foundation members, as well as the final ground profile. (It should be noted that some of existing foundations need underpinning, the detailed arrangement of which has not yet been finalised. However, this should not affect the stability of other foundation works, provided that these are constructed in the manner and sequence recommended.) 30

3. SLOPE STABILITY CALCULATIONS

As can be seen from Figs. I-3 a — d, II''-II'' is the critical section during

and after building construction as far as slope stability is concerned as is the lower part of section II-II after construction.

No. referred to in the agreed bundle 119 Addendum report S.W.K. & P. 6/75 (Contd.)

With the boundaries between the various oil strata thus determined, the soil strength parameters for the respective soil stratum as recommended in our first report can be adopted in the slope stability analysis. To take into account the adverse ground-water condition that might be envisaged during the wet season, the average ground-water level is assumed to be about 10 ft. higher than that observed during site investigations (which all took place in the dry season). This assumed level is in fact higher than the highest values so far observed (from January 1974 to May 1975) in Borehole C for Section II''-II'' and Borehole A for Section II-II (see Appendix VI-1 for complete records of water level readings).

10

For section II''-II'' during construction of the upper triangular foundation, the worst possible condition is to assume a vertical open cut without any lateral supports (see Fig. II-1), in Appendix II.

Under such conditions, it can be seen from Fig. II-1 and the calculations in Appendix II, using Janbu's routine method of analysis, that the critical slip surface is B3, with a factor of safety of 1.05. Bearing in mind that the actual ground-water level during construction in the dry season is certainly lower than that assumed in the calculations, and that lateral supports would be provided for the construction of the upper triangular foundation, the actual factor of safety should be somewhat higher than the above values. It can be seen from Fig. II-1 and calculation sheet No. II-5 in Appendix II that the factor of safety against slip for surface B-3 is increased to 1.21 if the average ground-water level is lowered by 10 ft.

20

With the full building load imposed, the factor of safety against general slip failure for slip surface B-3 in section II''-II'' is increased considerably to about 1.50 (see Fig. II-2), and the lowest value is 1.47 for slip surface B4. These should be quite adequate as adverse site conditions have already been assumed. As for section II-II, the assumption of the same adverse site conditions yield a lowest factor of safety of about 1.9 (see Fig. II-3), even for slip surfaces extending as far down as Babington Path. Since the ground further down (between Babington Path and Lyttelton Road) is fairly flat with an average gradient of about 11°, it is unlikely that the factor of safety against general slip will drop to any value lower than 1.9 with the addition of the full building load.

30

The present analysis substantiates the recommendations in our first report that the upper triangular foundation should be constructed in short sections (with lateral supports in the critical ones) in the dry season. As for the effect of the building load on the over-all slope stability, it is obvious from the calculations and Figs. II-1 & II-2 in Appendix II that this will definitely increase the stability of the slope above the site. Since the over-all slope below it is fairly gentle, the stability conditions is also unlikely to be aggravated (see Fig. II-3)

40

4. DESIGN OF RETAINING STRUCTURE FOR ACCESS ROAD

There are two principal design considerations: (1) over-all stability, and (2) deflection and stresses induced in the retaining structure.

Supreme Court of Hong Kong
No. referred to in the agreed bundle 119
Addendum report S.W.K. & P. 6/75
(Contd.)

The detailed location, spacing and depth of penetration of the various caissons for the retaining structure are shown in Figs. III-1 & III-2 in Appendix III. The basic arrangement is essentially the same as in our first report. The major alteration is in that part near Kotewall Road, with the soil in the space between the firstly constructed caissons not excavated, but supported by a face wall which in turn is supported by the caissons. This face wall should therefore be designed as wall slab spanning horizontally between the counterforts (which in this case are the caissons), with the earth pressure increasing linearly with depth. For design purpose, the soil pressure at any depth (x ft.) can be taken as $42 \times \text{lb/ft.}^2$ (see also calculation sheet Nos. V-1a & b in Appendix V).

10

In order to provide for adequate drainage of any ground water in the soil behind the retaining structure, a 12 in. thick 'no-fines' concrete layer should be placed behind the face wall, together with 3 in. diameter weep holes at 5 ft. vertical spacing in each section (see also Figs. III-1 & III-2). The cut slope above the retaining structure should either be turfed or chunamed, depending upon the actual soil condition exposed by excavation, with a 9 in. surface channel along the top part of the structure to collect the surface water.

As the caissons are very closely spaced, it follows that the over-all stability will remain the same as that in a continuous diaphragm wall. However, the caissons in the present case must be structurally strengthened as each one is supporting a larger volume of soil.

20

4.1 Over-all Stability

As this retaining structure has to support Kotewall Road, it is essential that (i) the caissons extend considerably below the critical slip surface, and (ii) the factor of safety of the critical slip surface passing through the bottom of the caissons is of an acceptable value.

As can be seen from the sections through the various parts of the retaining structure (see Fig. I-3c in Appendix I), section VI-VI is critical and requires detailed analysis. Using Janbu's routine method for slope stability analysis, it can be seen from Fig. IV-1 and the calculations in Appendix IV that slip surface 6 would be critical if the caissons did not extend beyond this depth, and the factor of safety against a general slip type of failure would be as low as 1.06. With the caissons extending beyond this depth to that proposed, the factor of safety for the critical slip surface 4 passing through the bottom of the caissons is increased to about 1.25, if the same soil strength parameters are to be adopted (ie. $c' = 300$ and 600 lb/ft.^2 respectively for colluvium and in-situ decomposed volcanics, and $\phi = 25^\circ$ for both soils). The assumed soil strength parameters ($\phi = 25^\circ$ and $c' = 600 \text{ lb/ft.}^2$) for decomposed volcanics are conservative as the lower part of the slip surface is quite near (or even below) the boundary beyond which the soil materials have a SPT (standard Penetration Test) value higher than 200 (see Fig. IV-1 in Appendix IV, and the additional triaxial test results in Appendix VI-2). With more realistic soil strength parameters of $\phi = 30^\circ$ and $c' = 600 \text{ lb/ft.}^2$ for the decomposed volcanics, the factor of safety for the critical slip surface 4 is increased considerably to about 1.5 (see pp IV-2a in Appendix IV). The value is considered to be acceptable in the present case, bearing also in mind that:

30

40

- (i) a more accurate method of analysis taking into account the interslice normal and tangential forces yields considerably higher factors of safety, with the above values of about 1.25 and 1.5 increased respectively to about 1.5 and 2.0 (see IV-3, 4, 4a & b in Appendix IV);
- (ii) the retaining structure is continuous with considerably higher factors of safety at other sections;
- and (iii) an adverse ground-water profile has already been assumed (see also Appendix VI-1).

4.2 Deflection & Stresses Induced in Retaining Structure

In designing the structural details of the caissons in the retaining structure, each member can be considered as under the lateral earth force of the mass of soil immediately behind it with a span equal to the spacing (centre to centre) of adjacent caissons. For each member, as there is a double caisson connected by a stiff ground beam just below access road level, the single caisson above this level can be designed as a cantilever fixed at access road level and acted upon by a linearly increasing lateral earth pressure. The lower double caissons can be considered as a pair of laterally loaded piles under the action of a horizontal force and a bending moment applied at the top. As the top and bottom parts of each member are in fact structurally continuous, it is obvious from simple statics that the horizontal force acting at the top of the lower double member is equal to the total horizontal earth force acting on the upper single member whilst the bending moment is equal to the maximum on the upper member at about access road level. 10

The design procedures for the upper single member are relatively simple (see Appendix V-1). In calculating the total horizontal earth force, Janbu's Routine Method of slices has been adopted to determine the critical slip surface passing through access road level (i.e. the assumed point of fixity). The corresponding horizontal interslice force at each member position is the total horizontal earth force acting on that member. To determine the maximum bending moment, a non-circular slip surface analysis using also the 'Method of Slices' (see Terzaghi & Peck, 1967, pp 247-251, Ref. 1) has been adopted. By taking moments about the assumed fixed point, and considering also the effect of the interslice tangential forces, the maximum bending moment can be evaluated. The total horizontal earth force and the maximum bending moment thus determined are respectively equal to 37.4 tons and 353 ft. ton per caisson. (see Fig. IV-2 and calculation sheets Nos. IV-5-9 in Appendix IV.) 30

In designing the lower double caisson to resist the above force and moment, the following conditions are assumed:—

- (i) The horizontal ground beam is hinged to the two caissons so that there will be no transmission of bending moment from one caisson to another.
- (ii) Terzaghi's horizontal subgrade reaction coefficient (K_h) is adopted in the analysis (see Terzaghi, 1955, Ref. 2). 40
- (iii) As most parts of the double caisson at the critical section (VI-VI) are in a colluvium layer which consists of many boulders, the horizontal subgrade

reaction coefficient (K_h), according to Terzaghi should increase linearly with depth (x), with

$$K_h = \frac{^n h x}{D}$$

in which $^n h$ is a constant coefficient depending upon the relative density of the soil, and D is the diameter of the caisson.

- (iv) For conservative design, $^n h$ value of 14 ton/ft³ as given by Terzaghi (1955, Ref. 2) for medium dense sand under water table has been adopted in the present analysis.

10

Accordingly, the deflection, earth pressure, shear force and bending moment in each member of the double caisson can be determined by solving a 4th order differential equation with variable coefficient subjected to the given boundary conditions (see Appendix V-2). With the shear force and bending moment along the caissons thus determined, the reinforcement in each can be designed accordingly.

The calculations thus far correspond basically to "active" earth forces, to which a factor of 1.5 is usually applied if the "at-rest" condition has to be designed for. However, in view of the fairly conservative assumptions that have been adopted, namely:

- (1) a cantilever-type upper member which, in fact, is partially restrained at the top by a continuous horizontal beam

20

and (2) a fairly low subgrade reaction coefficient for the lower double member

a multiplier of 1.25 is adequate and has been applied to the various values thus obtained. It can be seen from Appendix V that the maximum bending moment is 495 ft. ton in the caisson near Kotewall Road at about 9 ft. below access road level (i.e. 7 ft. below centre line of horizontal ground beam) and the corresponding reinforcement required for a 4 ft. diameter caisson is only about 1.3%, which is quite acceptable.

In addition to satisfying the structural requirements, it is also essential to ensure that:

- (i) The total lateral deflection of the top part of the retaining structure is not excessive. Calculations in Appendix V-3 (see calculation sheet No. V-13) indicate that this is only of the order of $\frac{3}{4}$ in., which is less than 0.3% of the height of the retaining structure above Kotewall Road, and is therefore acceptable.
- (ii) The earth pressure thus induced at any depth should not exceed the ultimate lateral resistance of the soil at the same depth. Comparison of the induced lateral earth pressure with the ultimate (according to Broms, 1964, Ref. 3) is as shown in Calculation Sheet Nos. V-14 & V-15 in Appendix V. It is obvious that the induced earth pressure is lower than the ultimate even at fairly shallow depth.

30

40

Supreme
Court of
Hong Kong

No. referred
to in the
agreed
bundle
119
Addendum
report
S.W.K. & P.
6/75
(Contd.)

- (iii) The ultimate moment of resistance of the soil divided by a certain factor of safety (say 3 to be on the safe side) should not be exceeded. It can be seen from Calculation Sheet No. V-16 in Appendix V that this is again much higher than the maximum bending moment of 495 ft. ton induced in the caisson near Kotewall Road.

Supreme
Court of
Hong Kong

**COPY LETTER FROM HWANG & CO.
TO PUBLIC WORKS DEPARTMENT**

2nd June, 1975

No. referred
to in the
agreed
bundle
120
Copy letter
from Hwang
& Co. to
Public
Works
Department
2/6/75

Senior Building Surveyor (H.K.),
Buildings Ordinance Office,
Public Works Department,
Murray Building,
Garden Road,
Hong Kong.

Dear Sir,

10

**Re: University Heights — 12 Babington Path
and Kotewall Road — I.L. 8171**

We have been consulted by the purchasers of the above premises regarding the following questions:—

- (1) When was the permit to commence work in the above site first granted by your Department.
- (2) After the landslide in June 1972, has the developer or architect of the above project submitted any plan showing detailed proposals for safeguarding the stability of all land adjoining the building site? If so, when was this plan submitted and has it been approved?
- (3) Apart from the above plan, are there any restrictions imposed by the government on the said project that would prevent the developer to resume construction work?

20

Kindly give us an early reply.

Yours faithfully,

Supreme
Court of
Hong Kong

**COPY LETTER FROM HWANG & CO.
TO PUBLIC WORKS DEPARTMENT**

No. referred
to in the
agreed
bundle
121
Copy letter
from Hwang
& Co. to
Public
Works
Department
10/6/75

Senior Building Surveyor (H.K.),
Building Ordinance Office,
Public Works Department,
Murray Building,
Garden Road,
Hong Kong.

10th June, 1975

Dear Sir,

10

**Re: University Heights — 12 Babington Path
and Kotewall Road — I.L. 8171**

Further to our letter dated the 2nd instant, we would like to seek your assistance regarding the following question:—

When did the developer or architect of the above site first apply for consent to commence building works?

Kindly give us the precise dates, if possible, regarding the above question and also questions (1) and (2) in our letter dated the 2nd June 1975.

Your early reply will be much appreciated.

Yours faithfully,

20

Supreme
Court of
Hong Kong

**LETTER FROM SCOTT WILSON KIRKPATRICK & PARTNERS
TO DEFENDANT**

No. referred
to in the
agreed
bundle
122
Letter
S.W.K. & P.
to Defendant
(amended
addendum
report
therein
mentioned
not
annexed)
16/6/75

Chinachem Group
1001-3 Bank of Canton Building
6, Des Voeux Road Central
Hong Kong

16th June, 1975

Attention: Mr. C. H. Duff
Dear Sirs,

12 Babington Path

10

We refer to our meeting with the Building Authority in their office on 23rd May 1975, concerning our recent addendum report on "12 Babington Path". To clarify some of the queries raised by them in this meeting, we have elaborated on some parts of our report by:—

- (i) furnishing additional information concerning water level readings and further triaxial soil test results to justify the water level and soil strength parameters thus assumed, and
- (ii) performing further stability analysis to check the over-all stability of the retaining structure with the adoption of what we believe to be more realistic soil strength parameters.

20

In addition, the third paragraph on page 4 has also been revised.

Our addendum report has therefore been amended accordingly with:—

- (i) some minor alterations on pages 2, 4 & 5 & new pages IV 2a, IV 4a, IV 4b.
- and (ii) the inclusion of a new Appendix VI, which consists
 - of (a) complete records of water level readings in Boreholes A, C, D & E and
 - (b) further triaxial soil test results.

One copy of this amended addendum report is enclosed herewith for your reference, together with six additional copies of those amended parts (which are in green colour).

30

Yours faithfully,
SCOTT WILSON KIRKPATRICK & PARTNERS

Supreme
Court of
Hong Kong

**LETTER FROM BUILDING AUTHORITY
TO C. H. DUFF**

No. referred
to in the
agreed
bundle
123
Letter from
Building
Authority to
C.H. Duff
17/6/75

Charles H. Duff, Esq.,
2013 Connaught Centre,
Hong Kong.

Dear Sir,

17th June, 1975.

12 Babington Path — I.L. 8171

I refer to your letter dated 8th May, 1975 with copies of site investigation reports and write to advise you of the following requirements:—

10

- a) Drainage channels shown on Fig. I-1 in Appendix I of the Addendum Report dated April, 1975 are dilapidated, blocked, or overgrown with vegetation. The channels must be reinstated immediately;
- b) All cracked chunam must be made good and consideration given to covering other areas;
- c) The large area of soft ground to the south of the existing triangular footing is a natural low spot where water collects. The existing footing prevents this water draining away and in consequence there may be heavy water seepage under this footing. Borehole 3', which was drilled before the landslide of 1972, is in this area of soft ground. You are required to drill an additional hole and to make comparisons to see if the soil has deteriorated. Consideration can be given to the laying of land drains to dry this and other soft spots.

20

2. Should you have any queries, please contact Mr. Pitt-Jones of this office at H-251111 Ext. 2346.

Yours faithfully,
(Sd.) M. Edwards
pro Building Authority.

Supreme
Court of
Hong Kong

**LETTER FROM PUBLIC WORKS DEPARTMENT
TO HWANG & CO.**

No. referred
to in the
agreed
bundle
124
Letter from
Public
Works
Department
to Hwang
& Co.
19/6/75

19th June, 1975.

Messrs. Hwang & Co.,
Room 306 Realty Building,
Hong Kong.

Dear Sirs,

12 Babington Path & Kotewall Road — I.L. 8171

I refer to your letter dated 2nd June, 1975 and advise you of the following:—

- a) Consent to commence foundation works was first granted on 17th November, 1971 and superstructural works on 7th January, 1972. 10
- b) After the landslide in June, 1972, the developer or authorised person of the above project has not submitted any plan for safeguarding the stability of all land adjoining this site for the approval of this office. However, site investigation reports have been submitted by the authorised person on 9th May, 1975.
- c) Before works may be resumed, it is necessary for the authorised person to submit details of the methods to be employed to safeguard the stability of all adjoining land. Apart from the above, there is no other special restrictions. 20

2. With regard to your letter of 10th June, 1975, please be advised that formal consent application for foundation works was first received by this office on 21st October, 1971 and application for superstructural works on 16th December, 1971.

Yours faithfully,

(Sd.) M. Edwards
pro Building Authority.

Supreme
Court of
Hong Kong

**COPY LETTER FROM C. H. DUFF
TO BUILDING AUTHORITY**

No. referred
to in the
agreed
bundle
125
Copy letter
C.H. Duff
to Building
Authority
19/6/75

Your Ref: BOO 1/2253/69

The Building Authority,
Public Works Department,
Murray Building,
Garden Road,
Hong Kong.

19th June, 1975.

Dear Sir,

12 Babington Path, I.L. 8171

10

Further to my telephone conversation with Mr. Brian Boys and following my call upon Mr. Pitt Jones, I send herewith two copies of the Addendum Report by Scott Wilson Kirkpatrick & Partners on 12 Babington Path dated April 1975 (amended June 1975) for your information and record. These are in addition to the copy delivered to-day to Mr. Pitt Jones.

Yours faithfully,
(Sd.) Charles H. Duff

**COPY LETTER FROM C. H. DUFF
TO BUILDING AUTHORITY**

No. referred
to in the
agreed
bundle
126
Copy letter
C.H. Duff
to Building
Authority
10/7/75

The Building Authority,
Public Works Department,
Murray Building,
Garden Road,
Hong Kong.

10th July, 1975.

Ref. B.O.O. 3/2253/69

Dear Sir,

10

12 Babington Path — I.L. 8171

I refer to the report on the above site prepared by Scott Wilson Kirkpatrick & Partners — Consulting Engineers — dated August 1974, (submitted to you in November 1974) and to the addendum report dated April 1975 (amended June 1975) submitted to you with my letter of 19th June, 1975.

2. During the course of the program of investigation, upon which the report is based, there have been many consultations between the Consulting Engineers and the undersigned and with the Civil Engineers of your Department, at which all essential points were fully discussed and agreed upon as they arose. Both sections of the report were the subject of a final conference held in Mr. Brian Boys' Office on 23rd May, 1975 and it is now my understanding that the report in its final form, as presented at this conference and subsequently amended, is entirely acceptable to your Civil Engineering Department.

20

3. The proposals in this report are based on the data obtained from a comprehensive site investigation which included extensive penetration tests, a range of laboratory tests on soil samples and observations of the natural water table over an extended period covering one complete annual weather cycle, the complete records of which are included in the appendix to the report. The proposals are designed to safeguard the stability of the site and all land adjoining the site, — particularly the slope below Kotewall Road upon which the access road is to be constructed.

30

4. The report also includes a complete re-examination of the original foundation design and describes in considerable detail a recommended construction program which is designed to prevent a dangerous situation from arising at any time during the construction phase.

5. **Block "B" (Lower Block)** The report finds that the existing spread footings and main raft foundation, already built in accordance with the original design, may safely be used provided that underpinning is carried out where necessary (on the northern part of the foundation) and provided that certain of the existing spread footings in this area are replaced by new spread footings, carried down to a deeper stratum and enlarged where necessary. The report also recommends that columns C54, C55, C56, C57, C58 and C59 be supported on caissons which will serve the additional purpose of increasing the factor of safety against sliding by intercepting any

40

possible "slip circle" passing under the toe of the adjoining slope.

6. **Block "B" (contd.)** The manner and extent of the proposed underpinning and replacement of spread footings cannot be known in advance and must be determined by inspection on the site as the work proceeds. It is therefore not possible for me to submit plans at this stage but full details of any such remedial work will, of course, be submitted to you at a later date in the form of record plans. Because of the critical nature of this work, I will have my own assessment of any particular case confirmed at the site by a soils expert from Scott Wilson Kirkpatrick & Partners.

7. **Block "B" (contd.)** At the conference in Mr. Brian Boys' Office, referred to in para. 2 above, it was confirmed that all work on Block "B" could safely proceed without waiting for the dry season provided that normal precautions were taken in the event of wet weather. I therefore now request that you renew your consent for the construction of the foundation and superstructure so that work can proceed immediately. I enclose herewith form 15 duly completed and the original form 14 for your endorsement. 10

8. **Block "A"** The report finds that the original foundation design can safely be used but it is recommended that the top row of columns on the south side (Nos. C23, C25, C28, C30, C33, C36) be supported on caissons as shown in the report. These caissons serve the dual purpose of transferring the load to a lower stratum and of contributing greatly to the stability of the slope upon which these foundations bear. With the exception of constructing the caissons, the foundation work for Block "A" must be deferred until the dry season. 20

9. **Approach Road** That part of the approach road, the structural plans for which were approved in 1971, can, according to the report, be constructed in accordance with the approved drawings except that the supporting columns (Nos. C1, C2, C3, C4) for the upper section of the road (adjoining Kotewall Road) must be supported on caissons as shown. The caissons will also contribute to the stability of the slope in this area.

10. **Approach Road (contd)** That part of the approach road running below Kotewall Road and parallel to it has been completely redesigned, employing a system of caissons which will not only act as a retaining wall for the cutting but will also contribute greatly to the stability of the whole slope. The report shows the proposal in detail and supplies supporting calculations from which it will be seen that the loading effect from the slopes above Kotewall Road have been taken into account. Structural plans for a retaining wall for this section of the approach road, submitted to your office on 27th May, 1972, were never approved and have been retained by your office ever since, — may I suggest that, to avoid confusion, these plans and calculations be returned to me? 30

11. **Caissons** At the conference, referred to in para. 2 above, it was agreed that the construction of all caissons, subject to normal precautions being taken in the case of wet weather, need not be delayed until the dry season. It was further agreed that the caissons be installed as soon as possible because they will not only contribute greatly to the stability of the site and adjoining land but will also make future foundation excavation work much safer. I am therefore submitting herewith a caisson excavation 40

Supreme
Court of
Hong Kong

No. referred
to in the
agreed
bundle
126

Copy letter
C.H. Duff
to Building
Authority
10/7/75
(Contd.)

plan, together with form 13, with the request that permission be granted for excavation work on the caissons to commence forthwith. Preparation of calculations (additional to those already contained in the Report) and complete reinforcement details are in hand and will be ready for submission in about four weeks time.

Yours faithfully,
(Sd.) Charles H. Duff

Supreme Court of Hong Kong

No. referred to in the agreed bundle 126
Copy letter C.H. Duff to Building Authority 10/7/75 (Contd.)

GOVERNMENT OF HONG KONG.

Form 13.

BUILDINGS ORDINANCE.

(Chapter 123).

Section 14.

BUILDING (ADMINISTRATION) REGULATIONS.

Regulation 31.

Application for consent to the commencement and carrying out of building works or part of building works or of street works.

10th July, 1975.

To the Building Authority,

I/we, (name of applicant in block letters) Charles H. Duff
apply for your consent to the commencement and carrying out of the following works (here specify the type of work, e.g. building works or street works or, if the application is in respect of part only of building works, specify the part in respect of which the application is made)—
Caisson Excavation
at (No. and name of street) 12 Babington Path & Kotewall Road
on (Lot No./Permit Area No.) I.L. 8171

1. The following plans of the above works have been approved by you—

Plans.	Date of notice of approval.	B.O.O. Ref. No.
Spread Footing (For Main Bldg)	21-10-71	3/2253/69
Building	8- 9-70	2/2253/69
Building (Amendments)	9-10-71	2/2253/69
Structural (For Main Bldg)	21-10-71	3/2253/69
Ramp Structure & Part Retaining Walls for Access Road	25- 2-72	3/2253/69
Drainage	10- 2-72	4/2253/69

3. *The certificate, Form 10, required by regulation 17 of the Building (Administration) Regulations, in connexion with the proposed structural use of steel and/or reinforced concrete, was submitted on 19.....

4. *The certificate (stability certificates) required by regulation 18 of the Building (Administration) Regulations was submitted on 19.....

11 1 75

Signature of applicant.

10th July, 1975.

* Delete if not applicable.

Supreme
Court of
Hong Kong

**COPY LETTER FROM C. H. DUFF
TO BUILDING AUTHORITY**

No. referred
to in the
agreed
bundle
127
Copy letter
C.H. Duff
to Building
Authority
7/8/75

**The Building Authority,
Public Works Department,
Murray Building,
Garden Road,
Hong Kong.**

Ref: B.O.O. 3/2253/69

7th August, 1975.

Dear Sir,

10

12 Babington Path — I.L. 8171

With reference to my conversations with Mr. C. K. Lau, Mr. P. Pitt-Jones and Mr. R. Tsao this afternoon, this will confirm that I now wish to withdraw the plans and forms 13, 14 and 15 submitted with my letter of 10th July, 1975.

Yours faithfully,
(Sd.) Charles H. Duff

Supreme
Court of
Hong Kong

**COPY LETTER FROM C. H. DUFF
TO BUILDING AUTHORITY**

No. referred
to in the
agreed
bundle
128
Copy letter
C.H. Duff
to Building
Authority
8/8/75

The Building Authority,
Public Works Department,
Murray Building,
Garden Road,
Hong Kong.

Ref. B.O.O. 3/2253/69

8th August, 1975.

Dear Sir,

10

12 Babington Path — I.L. 8171

Further to my letter of yesterday's date and pursuant to the conversations referred to therein, I submit herewith revised form 13 together with caisson excavation plan which I believe you will now find satisfactory.

Your early permission to commence excavation work will be greatly appreciated.

Yours faithfully,
(Sd.) Charles H. Duff

Supreme
Court of
Hong Kong

**COPY LETTER FROM HWANG & CO.
TO DEFENDANT**

No. referred
to in the
agreed
bundle
129

JC/4763/75

19th August, 1975

Copy letter
from Hwang
& Co. to
Defendant
19/8/75

Chinachem Investment Co., Ltd.,
Room 1001-1003 Bank of Canton Bldg.,
6-7 Des Voeux Road C.,
Hong Kong.

Dear Sirs,

**Re: University Heights — 12 Babington Path
and Kotewall Road — I.L. 8171**

10

We act for a number of purchasers of various individual shares in the above lot and of the building to be erected thereon.

On perusing the relevant Sale and Purchase Agreements, we note that under Clause 3(3) interest is payable at the rate of 1% per month in the event stipulated therein. We write to enquire whether you are willing to pay interest at the rate provided therein every month until completion of the building.

Yours faithfully,

Supreme
Court of
Hong Kong

**LETTER FROM F. ZIMMERN & CO.
TO HWANG & CO.**

No. referred
to in the
agreed
bundle
130

Letter from
F. Zimmern
& Co. to
Hwang
& Co.

(No.
JC/4763/75)
20/8/75

Messrs. Hwang & Co.,
Solicitors,
306 Realty Bldg.,
Hong Kong

20th August, 1975

Dear Sirs,

WITHOUT PREJUDICE

**Re: University Heights — 12 Babington Path
and Kotewall Road — I.L. 8171**

10

Your letter of the 19th instant to our clients, Chinachem Investment Co., Ltd. has been handed to us with instructions to reply thereto.

As you are no doubt aware, as a result of the land slides which occurred in the vicinity of the Kotewall Road area in 1972, Government has "frozen" all developments in the Kotewall Road area including I.L. No. 8171.

We have advised our clients that by virtue of the land slides in 1972 and the subsequent freezing of the subject development, the above-captioned agreement for sale and purchase is frustrated and the parties thereto are discharged from all liabilities arising out of and in connection with the agreement.

20

We would also like to inform you that our clients are still negotiating with Government with a view to enable them to continue to develop the above premises. Unfortunately, our clients are not in a position to indicate when further works may be executed on the site.

We have, accordingly, upon instruction by our clients, to make the following offer to your respective clients with a view to settling this outstanding sale and purchase namely:—

1. Our clients shall forthwith refund to your clients all deposits paid herein free of interest or compensation.

If this part of the offer is accepted by your clients, our clients would insist that a memorandum of cancellation be entered into between the vendor and purchaser cancelling the subject agreement for sale and purchase.

30

2. If your respective clients are still interested in the purchase of the above-captioned premises, our clients are quite prepared to implement their respective agreements for sale and purchase but obviously, the completion thereof will be uncertain. Insofar this part of the offer is concerned, our clients will only be prepared to implement such agreements for sale and purchase provided the purchasers concerned will undertake not to enforce the terms and conditions thereof (including a claim for interest).

Supreme
Court of
Hong Kong

No. referred
to in the
agreed
bundle
130

Letter from
F. Zimmern
& Co. to
Hwang & Co.
(No. JC/
4763/75)
20/8/75
(Contd.)

We should be obliged if you would take your clients' instructions to the offers contained in this letter. We would like to add, if your respective clients insist in pursuing their respective claims, our clients shall have no alternative but to maintain that the subject agreements for sale and purchase are discharged as a result of its frustration thereto.

Yours faithfully,

Supreme
Court of
Hong Kong

**LETTER FROM F. ZIMMERN & CO.
TO HWANG & CO.**

20th August 1975

No. referred
to in the
agreed
bundle
131
Letter from
F. Zimmern
& Co. to
Hwang
& Co.
(No.
JC/4763/75)
20/8/75

Messrs. Hwang & Co.,
Solicitors,
306 Realty Bldg.,
Hong Kong

WITHOUT PREJUDICE

Dear Sirs,

**Re: University Heights — 12 Babington Path
and Kotewall Road — I.L. 8171**

10

Further to our letter of today's date in connection with the above and as to the grounds of frustration, we would refer you to clause 22 of the agreement for sale and purchase which we reproduce hereunder:—

“It is further agreed that notwithstanding anything herein contained should any dispute arise between the parties touching or concerning this Agreement or should any unforeseen circumstances beyond the Vendor's control arise whereby the Vendor becomes unable to sell the said undivided shares and Apartment to the Purchaser as hereinbefore provided, the Vendor shall be at liberty to rescind this Agreement forthwith and to refund to the Purchaser all instalments of purchase price paid by the Purchaser hereunder without interest or compensation and upon such rescission and upon repayment of the instalments of purchase price this Agreement shall become null and void as if the same had not been entered into and neither party hereto shall have any claim against the other in respect thereof.”

20

Yours faithfully,

Supreme
Court of
Hong Kong

**LETTER FROM SCOTT WILSON KIRKPATRICK & PARTNERS
TO DEFENDANT**

No. referred
to in the
agreed
bundle
132
Letter
S.W.K. & P.
to Defendant
22/8/75

Chinachem Group
1001-3 Bank of Canton Building
Des Voeux Road Central
Hong Kong

22nd August, 1975

Dear Sirs,

**12, Babington Path
Geotechnical Investigation**

10

We confirm that we have undertaken further design studies at Mr. C. H. Duff's request and have handed him one copy of our report dated July 1975; a further copy is enclosed herewith.

2. We have discussed this report with Mr. Duff who has expressed his satisfaction with its contents and we conclude that we have now fulfilled our commission as subsequently extended. We suggest, therefore, that we should take no further action unless specifically requested to advise on any particular problem that may arise during construction.

3. We also suggest that it is of considerable importance that regular observations of ground-water level in the 5 piezometers installed on the site should continue for as long as possible. 20

4. We shall shortly submit our account to date and confirm our readiness to render occasional further service, upon request, on the same fee basis as heretofore.

Yours faithfully,
SCOTT WILSON KIRKPATRICK & PARTNERS

Supreme
Court of
Hong Kong

No. referred
to in the
agreed
bundle
133
Letter
Building
Authority to
C.H. Duff
with copy
Cease Work
Order by
Building
Authority
with marked
cutting from
a calendar
23/8/75

**LETTER FROM BUILDING AUTHORITY TO C. H. DUFF
WITH COPY CEASE WORK ORDER BY BUILDING AUTHORITY
WITH MARKED CUTTING FROM A CALENDAR**

August 1975						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

23/8/75

KEVIN HARRIS
of HK

Printed by Paramount Printing Co., Ltd. Hong Kong.
PLANS TO PARSONS 17th Sept

Supreme
Court of
Hong Kong

No. referred
to in the
agreed
bundle
133

Letter
Building
Authority to
C.H. Duff
with copy
Cease Work
Order by
Building
Authority
with marked
cutting from
a calendar
23/8/75
(Contd.)

Charles H. Duff, Esq.,
2013 Connaught Centre,
Hong Kong.

23rd August, 1975

Dear Sir,

12 Babington Path & Kotewall Road — I.L. 8171, Hong Kong

With reference to my Notice No. C3/HKW/75 enclosed requiring your contractor to cease the building works at the above site and to the site meeting held on 23rd August, 1975.

2. Your attention is however drawn to the following works which are required to be carried out immediately to protect the site from further deterioration:— 10

- a) All chunam-plastering that is required to the slope should be continued.
- b) All surface channels should be cleared. The surface channels on the upper part of the slope and nearest to Kotewall Road should be connected.
- c) All excavations that have been carried out on the slope should be backfilled and chunam plastered.
- d) All trial holes should be backfilled with concrete, special attention must be made to the one directly underneath the triangular footing.
- e) It was agreed that investigation work to one footing can be carried out and you may proceed with this. 20

Yours faithfully,
(Sd.) P. H. Hayward
pro Building Authority.

Supreme Court of Hong Kong



GOVERNMENT OF HONG KONG BUILDINGS ORDINANCE.

Order by the Building Authority under the provisions of Sections 23, 24(1), 28(3), 29(2) or 31(2)

No. referred to in the agreed bundle 133 Letter Building Authority to C.H. Duff with copy Cease Work Order by Building Authority with marked cutting from a calendar 23/8/75 (Contd.)

Notice No. 03/LN/75

OFFICE OF THE BUILDING AUTHORITY.

B.O.O. Ref. No. V/2253/69

Hong Kong, ... 23rd August, 1975.

To Chi Fung Company Limited, 9 Ice House Street, Hong Kong.

Owner(s) of (address of building) 12 Babington Path & Kotewall Road, Hong Kong, on (lot number/permit area number) L.L. 8171

It has been brought to my attention that building works being carried out

at the above address, contravene(s) the provisions of Section 14(1)(b) of the Buildings Ordinance in that building works have been carried out without consent of the Building Authority.

2. In accordance with the powers vested in me under the provisions of Section 23 of the Buildings Ordinance, I hereby order you as contractor to cease the building works until such times as this notice is withdrawn in writing.

c.c. Mr. Charles H. Duff, 2013 Connaught Centre, Hong Kong.

2/- 3/-

[Signature] (R. LAU)

pro. Building Authority.

Your attention is drawn to the provisions of Sections 24(3), 24(4), 28(3), 29(5), 31(3) and 33 of the Buildings Ordinance. Chinachem Investment Co., Ltd., 9 Ice House Street, Hong Kong.

Supreme
Court of
Hong Kong

**LETTER FROM HWANG & CO.
TO PUBLIC WORKS DEPARTMENT**

No. referred
to in the
agreed
bundle
135

BOO 2/2253/69
JC/4763/75

27th August, 1975

Letter from
Hwang
& Co. to
Public
Works
Department
27/8/75

Senior Building Surveyor,
Building Ordinance Office,
Public Works Department,
Murray Building,
Garden Road,
Hong Kong.

10

Dear Sir,

Re: 12 Babington Path & Kotewall Road — I.L. 8171

Thank you for your letter dated the 19th June 1975.

We should be grateful if you would let us know the following:—

1. Has the developer or authorized person of the above project submitted any further plan for your approval since the 19th June 1975?
2. Whether permission to resume construction works on the above project has been given by your office?
3. Whether the above project is subject to the current “freeze” on develop- 20
ment in the area.

Kindly give us an early reply.

Yours faithfully,

Supreme
Court of
Hong Kong

**LETTER FROM BUILDING AUTHORITY
TO C. H. DUFF**

27th August, 1975.

No. referred
to in the
agreed
bundle
136
Letter
Building
Authority to
C.H. Duff
27/8/75

Charles Duff, Esq.,
2013 Connaught Centre,
Hong Kong.

Dear Sir,

12 Babington Path — I.L. 8171

With reference to your letter of 8th August, 1975 and the Form 13 accompanied.

2. You are advised that your application for consent to commence caisson excavation work is refused under Section 16 (3) (a) of the Buildings Ordinance as you have not submitted drawings, calculations, working programme and precautionary measures for caisson work for approval based on the report you submitted on 19th June, 1975. 10
3. Your Form 13 and caisson excavation plan are returned herewith.

Yours faithfully,
(Sd.) P. H. Hayward
pro Building Authority.

Supreme
Court of
Hong Kong

**LETTER FROM F. ZIMMERN & CO.
TO HWANG & CO.**

No. referred
to in the
agreed
bundle
137

Letter from Messrs. Hwang & Co.,
F. Zimmern Solicitors,
& Co. to 306, Realty Building,
Hwang & Co. Hong Kong.
8/9/75

8th September, 1975.

WITHOUT PREJUDICE

Dear Sirs,

**Re: University Heights — 12 Babington Path
and Kotewall Road — I.L. No. 8171**

10

We would like to refer you to our letters both dated the 20th ultimo in connection with the above and would be obliged if you could let us know your clients' decision in this matter.

In your letter to our clients dated the 19th ultimo, you informed our clients that you acted for a "number of purchasers"; could particulars of these purchasers be supplied to us. Your early reply will be appreciated.

Yours faithfully,

Supreme
Court of
Hong Kong

No. referred
to in the
agreed
bundle
138
Building
Authority,
Form 16
8/9/75

GOVERNMENT OF HONG KONG.

Form 16.

BUILDING (ADMINISTRATION) REGULATIONS.

Regulation 20.

Notice of appointment of registered contractor, undertaking
by registered contractor and notice of commencement
of building works or street works.

To the Building Authority,

.... 8th September.... 19.75.

In accordance with the provisions of regulation 20 of the Building (Administration) Regulations—

(a) ~~I/we~~ Charles H. Duff.....

authorized architect appointed in respect of the building/street* works at—

(i) number and name of street and locality 12. Babington Path & Kotewall Road

(ii) lot number with details of any section or subsection of the lot .. I.L. 8171

(to be renewed)

to the carrying out of which you gave/renewed* your consent by Permit No. BA 606/71.....

B.O.O. Ref. No. .. 2253/69..... on 17th November, 1971....., ~~EX~~.....

hereby give you notice that the person for whom the building works/street works* are to be carried
out has appointed CHI FUNG INVESTMENT COMPANY LIMITED.....

(Name of registered contractor).

of .. Rm. 1001-3 Bank of Canton Building, 6, Des Voeux Road, C., H.K.

(Address).

to be registered contractor in respect thereof and that the said works will be commenced/resumed*
on 19.....

.....
Signature of authorized architect.

And

(b) ~~I~~/We, the said CHI FUNG INVESTMENT CO. LTD....., registered contractor,
registration certificate number ... 1395..... confirm that ~~I~~/we have been appointed to carry out
the above described building/street* works and I/we hereby undertake to carry out the above works in
strict compliance with the Buildings Ordinance and regulations made thereunder.

CHI FUNG COMPANY LIMITED
.....
Signature of registered contractor.

* Delete whichever is inapplicable.

Supreme Court of Hong Kong

No. referred to in the agreed bundle 138 Building Authority, Form 16 8/9/75 (Contd.)

GOVERNMENT OF HONG KONG.

Form 9.

BUILDINGS ORDINANCE.

(Chapter 123).

Section 4(1).

BUILDING (ADMINISTRATION) REGULATIONS.

Regulation 29.

Application for approval of plans of building works and/or street works* and Notice of appointment of authorized person (*architect/engineer/surveyor) as co-ordinator; Notice of appointment of registered structural engineer as consultant to appointed authorized person.

8th September, 1975.

To the Building Authority,

We CHINACHEM INVESTMENT COMPANY LIMITED (Name of applicant in block letters).

in accordance with the provisions of regulation 29 of the Building (Administration) Regulations—

- (a) apply for your approval of the plans submitted herewith;
(b) certify that the said plans have been prepared by authorized person of Charles H. Duff;
(c) give you notice that we have appointed the said Mr. Charles H. Duff authorized person to be the co-ordinator in respect of these works;
(d) certify that the structural elements have been designed and the details prepared by Mr. TAM CIE SOM registered structural engineer of Caroline Mansions;
(e) give you notice that we have appointed the said Mr. Charles H. Duff as consultant to the appointed authorized person in respect of the above described works.
2. Particulars of the building works and/or street works*—(To be completed as appropriate).

GENERAL.

- (a) Number and name of street and locality 12 Babington Path & Kotewall Road I.L. 8171
(b) Lot number with details of any section or subsection of the lot
(c) Name and address of the owner CHINACHEM INVESTMENT COMPANY LIMITED of Rm. 1001-3 Bank of Canton Building, 6 Des Voeux Road, Central.
(d) Name and address of any duly authorized agent of the owner NIL
(e) Number of any licence or permit relating to the proposed building works or site Permit No. BA 606/71 (to be renewed), BOO Ref. No. 2253/69

(f) The date on which the tenure of the lot will expire in any case in which the unexpired portion of the lease is less than 10 years **NIL**

***BUILDING WORKS.**

- (a) Width of street or streets upon which the building abuts or fronts
- (b) The intended use of the building or parts thereof on completion of the building works
- (c) Details of any conditions of sale, any particular lease covenants affecting the height, design, type or use of the building which may be erected on the lot or permit area

***STREET WORKS.**

- (a) Width of street or streets from which access is to be obtained
- (b) Whether the street works are for construction of an access road or a private street
- (c) If an access road, state the number of separate buildings or flats (with total floor areas) for which it is intended to provide access
- (d) Details of any conditions of sale and any particular lease covenants affecting the street works

CHINACHEM INVESTMENT CO., LTD

[Handwritten Signature]
Authorized Signature
Signature of applicant.

....., 19.....

I confirm that I have been appointed as the authorized person to be the co-ordinator in respect of the above described works.

[Handwritten Signature]
Signature of authorized person.

[Handwritten Signature]....., 1975

I confirm that I have been appointed as the registered structural engineer to be the consultant to the appointed authorized person in respect of the above described works.

[Handwritten Signature]
Signature of registered structural engineer.

[Handwritten Signature]....., 1975

* Delete whichever is inapplicable.

Supreme
Court of
Hong Kong

**LETTER FROM HWANG & CO.
TO F. ZIMMERN & CO.**

No. referred
to in the
agreed
bundle
139

DQC/LC
JC/4763/75

11th September, 1975

Letter from
Hwang
& Co. to
F. Zimmern
& Co.
11/9/75

Messrs. F. Zimmern & Co.,
Solicitors & Notaries,
Hong Kong.

Dear Sirs,

**Re: University Heights — 12 Babington Path
and Kotewall Road — I.L. 8171**

10

With reference to your letters dated the 20th August 1975 and the 8th September 1975, we are still taking instructions from our clients, and will give you a reply as soon as possible.

Yours faithfully,

**LETTER FROM BUILDING AUTHORITY
TO C. H. DUFF**

No. referred
to in the
agreed
bundle
140
Letter
Building
Authority to
C.H. Duff
11/9/75

Ref. BOO 1/2253/69

11th September, 1975.

Charles Duff, Esq.,
2013 Connaught Centre,
Hong Kong.

Dear Sir,

12 Babington Path — I.L. 8171

With reference to the site meeting held on 8th September 1975 between 10
yourself and this office.

2. It was noted that apart from the backfilling of excavation holes for caisson caps and inspection pits and some chunaming to the slope, much of works as required in my letters of 23rd August, 1975 and 17th June 1975 have not been dealt with. Because of this, you were once again advised of the details of the works outstanding. These works are as follows:—

- a) Existing channels where blocked are to be cleared and where damaged are to be repaired.
- b) The channel blocked by rubble from the retaining wall should be made good. 20
- c) A new channel is to be formed, to replace the one destroyed by recent site works, at the inner side of the ramp. A silt trap is to be constructed at a convenient position to serve this and the other channels at the eastern side of the site.
- d) The old silt traps near the nullah along the western boundary are to be recovered and cleaned.
- e) A new channel should be formed at the lower edge of the new chunam at the top of the site.
- f) The rubbish near the contractor's shed on the Kotewall Road side is to be cleared. 30
- g) The banking to the ramp is to be graded.
- h) The slope below the top channel where the retaining wall demolition works have led to partial undermining is to be chunamed.

3. As the wet season is not over, you are advised that the above works should be carried out immediately.

Supreme
Court of
Hong Kong
No. referred
to in the
agreed
bundle
140
Letter
Building
Authority to
C.H. Duff
11/9/75
(Contd.)

4. There is still no application for the retention of the contractor's shed. May I remind you of the necessity for you to submit details of this shed together with a formal application and the approval of the Crown Lands and Survey Office (as the shed is outside the lot boundary) to this office as soon as possible.

Yours faithfully,
(Sd.) P. H. Hayward
pro Building Authority

Supreme
Court of
Hong Kong

No. referred
to in the
agreed
bundle
141
Letter
C.H. Duff
to Building
Authority
with copy
Building
Authority
Form 10,
Form 13
(copies of
plans and
calculations
therein
referred to
missing)
15/9/75

**LETTER FROM C. H. DUFF TO BUILDING AUTHORITY
WITH COPY BUILDING AUTHORITY FORMS 10 AND 13
(copies of plans and calculations therein referred to missing)**

The Building Authority,
Public Works Department,
Murray Building,
Garden Road,
Hong Kong.

B.O.O. Ref. 3/2253/69

Dear Sir,

12 Babington Path — I.L. 8171

15th September, 1975.

10

I submit herewith plans and calculations which show in complete detail the proposed retaining structure and supporting caissons for the access road and also the load bearing caissons to be provided for the support of the few building columns which are located at the toe of the main slope.

The enclosed (3rd) section of the Report by Scott Wilson Kirkpatrick & Partners, dated July 1975, forms a definite part of the design calculations and is therefore a part of this submission. The relationship between my own calculations and those in this report is more clearly described on the first page of my calculations. The two earlier sections, dated August 1974 and April 1975, were submitted to you some months ago.

20

The special circumstances of this particular development which, in my opinion, should warrant its being granted priority status, are already well known to you and accordingly, I hereby earnestly apply to you for priority classification.

In anticipation of early consent to commence work, I enclose a form 13, duly completed:— a completed form 10 is also enclosed. With the thought that it might assist in expediting the examination of the plans and calculations by your two Engineering Offices, I am submitting two sets of calculations and three sets of plans.

I will be most grateful for anything you can do to assist me in getting this work started as soon as possible.

30

Yours faithfully,
(Sd.) Charles H. Duff

Supreme Court of Hong Kong

No. referred to in the agreed bundle 141 Letter C.H. Duff to Building Authority with copy Building Authority Form 10, Form 13 (copies of plans and calculations therein referred to missing) 15/9/75 (Contd.)

GOVERNMENT OF HONG KONG.

Form 10.

BUILDING (ADMINISTRATION) REGULATIONS.

Regulation 17.

Certificate of Authorized Person (*Architect/Engineer/Surveyor) and

*Registered Structural Engineer.

...15th September,....., 1975.

To the Building Authority,

In accordance with the provisions of regulation 17 of the Building (Administration) Regulations, I/we* hereby certify that the structural details and calculations attached hereto relating to building works and/or ~~street works~~* at—

(a) number and name of street and locality12 Babington Path and Kotewall Road....

(b) lot number with details of any section or subsection of the lotI.L.A. 8171.....

have been prepared under—

- * my supervision or direction.
* the supervision or direction of the undersigned

as required by regulation 85 of the Building (Construction) Regulations, 1975.

I further certify that such structural details and calculations comply in all respects with the relevant provisions of—

- * (i) the London Building (Construction) By Laws, 1953, issued by the London County Council on the 1st day of January, 1953
* (ii) the Buildings Ordinance, (Chapter 123), and regulations made thereunder.
* (iii) Permit No. issued under section 42 of the Buildings Ordinance dated

This certificate is subject to a modification given/applied for* in respect of regulations of the Building (Construction) Regulations

Signature of registered structural engineer who prepared the structural details etc.

Signature of registered structural engineer who prepared the structural details etc.

Signature of authorized person.

* Delete whichever is inapplicable.

Supreme Court of Hong Kong

No. referred to in the agreed bundle 141 Letter C.H. Duff to Building Authority with copy Building Authority Form 10, Form 13 (copies of plans and calculations therein referred to missing) 15/9/75 (Contd.)

GOVERNMENT OF HONG KONG.

Form 13.

BUILDINGS ORDINANCE.

(Chapter 123).

Section 14.

BUILDING (ADMINISTRATION) REGULATIONS.

Regulation 31.

Application for consent to the commencement and carrying out of building works or part of building works or of street works.

.....15th September....., 1975.

To the Building Authority,

I, ~~Mr.~~ (name of applicant in block letters) Charles H. Duff apply for your consent to the commencement and carrying out of the following works (here specify the type of work, e.g. building works or street works or, if the application is in respect of part only of building works, specify the part in respect of which the application is made)— Construction of Caissons at (No. and name of street) 12 Babington Path & Kotewall Road on (Lot No./Permit Area No.) I.L.A. 8171

1. The following plans of the above works have been approved by you—

Table with 3 columns: Plans, Date of notice of approval, B.O.O. Ref. No. The first row contains the value 3/2253/69.

3. *The certificate, Form 10, required by regulation 17 of the Building (Administration) Regulations, in connexion with the proposed structural use of steel and/or reinforced concrete, was submitted on, 19.....

4. *The certificate (stability certificates) required by regulation 18 of the Building (Administration) Regulations was submitted on herewith

Signature of applicant: CHARLES H. DUFF

Signature of applicant.

15th September....., 1975.

* Delete if not applicable.

Supreme
Court of
Hong Kong

LETTER FROM HWANG & CO. TO DEFENDANT

No. referred
to in the
agreed
bundle
142
Letter from
Hwang
& Co. to
Defendant
(JC/4763/75
(A))
18/9/75

JC/4763/75(A)

18th September, 1975

Chinachem Investment Co. Ltd.,
Room 1001-1003 Bank of Canton Bldg.,
Hong Kong.

Dear Sirs,

**Re: University Heights — 12 Babington Path
and Kotewall Road — I.L. 8171**

We act for Mr. Cheung Kung Leung, purchaser of Apartments A1 and A2 10
on the 12th floor and roof together with car parking space Nos. 2 and 3 on Deck "D"
in the above lot and of the building to be erected thereon.

We are instructed by our said client to give you notice which we hereby do
that our client will after the expiry of 14 days rescind the Sale and Purchase Agreements
dated 29th May 1971 and 20th September 1971 pursuant to Clause 3(2) thereof.
Our client will upon the rescission of the said Agreements demand from you repayment
of all amount paid under the said Agreements together with interest at the rate of
1% as stated below:—

\$23,520.00	with interest at 1% per month from 9th March 1971 to the date of repayment	10
\$29,750.00	with interest at 1% per month from 31st July 1971 to the date of repayment	20
<u>\$53,270.00</u>		

Yours faithfully,

Supreme
Court of
Hong Kong

**LETTER FROM HWANG & CO.
TO DEFENDANT**

No. referred
to in the
agreed
bundle
143

18th September, 1975

JC/4763/75(B)

Letter from
Hwang
& Co. to
Defendant
(JC/4763/75
(B))

Chinachem Investment Co. Ltd.,
Room 1001-1003 Bank of Canton Bldg.,
Hong Kong.

18/9/75 Dear Sirs,

**Re: University Heights — 12 Babington Path
and Kotewall Road — I.L. 8171**

10

We act for Madam Fou You Sing, purchaser of Apartment A3 on the 10th floor and car parking space No. 7 on Deck "A" in the above lot and of the building to be erected thereon.

We are instructed by our client to give you notice which we hereby do that our client will after the expiry of 14 days rescind the Sale and Purchase Agreement dated the 4th June 1971 pursuant to Clause 3(2) thereof. Our client will upon the rescission of the said Agreement demand from you repayment of all amount paid under the said Agreement together with interest at the rate of 1% as stated below:—

\$ 2,000.00	with interest at 1% per month from 24th March 1971 to the date of repayment
\$18,850.00	with interest at 1% per month from 2nd April 1971 to the date of repayment

20

\$20,850.00

Yours faithfully,

Supreme
Court of
Hong Kong

**COPY LETTER FROM HWANG & CO.
TO F. ZIMMERN & CO.**

No. referred
to in the
agreed
bundle
144
Letter from
Hwang
& Co. to
F. Zimmern
& Co.
18/9/75

Messrs. F. Zimmern & Co.,
Solicitors & Notaries,
Hong Kong.

18th September, 1975

Dear Sirs,

**Re: University Heights — 12 Babington Path
and Kotewall Road — I.L. 8171**

We refer to your two letters dated the 20th August 1975 and are instructed 10
to inform you that your clients' offers are not acceptable to our clients.

With reference to your letter dated the 8th September 1975, we send you
herewith the following particulars as requested:—

1. Chan Kai Shiu
Lai Amy Kwok Mei
2. Tsang Yuk King
3. Tam Kwok Cheung
Ng Tack May
Ng May Lan (deceased)
4. Kwok On Pong 20
5. Chan Kwan Sheung
6. Lo Kam To
7. Man Chiu Tong
8. Wong Lai Ying
9. Au Young Chung Oi, Betty
10. Cheng Si Yic
Cheung Lai Sun, Juliana
11. Loke Yip Ngoi Yan
12. Yim Yan
13. Wong Man Tack 30
Lui Lai Ying
14. Lo Kai Fai
15. Lock Cheung Helen
16. Li Yu Tung
17. Ng Hoi Ming
18. Chung Yuk Wa, Agnes
19. Cheng Chi Chion
20. Leung Shing Kwan, Charles
Lam Shuk Han, Margaret
21. Lam Tsang Suk Yee 40
22. Tsang Suk Yee (Trustee)
Lam Kit Woo (Beneficiary)
23. Tsang Suk Yee (Trustee)
Lam Kit Ping (Beneficiary)

Yours faithfully,

Supreme
Court of
Hong Kong

**LETTER FROM F. ZIMMERN & CO.
TO HWANG & CO.**

No. referred
to in the
agreed
bundle
145
Letter from
F. Zimmern
& Co. to
Hwang
& Co.
(25599)
18/9/75

Messrs. Hwang & Co.,
Solicitors,
Hong Kong.

18th September, 1975.

Dear Sirs,

Re: University Heights

We acknowledge receipt of your letter of the 18th instant.

10

We have received instructions from our clients to institute proceedings herein for (inter alia) a declaration that the subject agreements for sale and purchase between our clients and your respective clients are or have been frustrated.

Would you please let us know whether you have authority to accept service of the proceedings for and on your respective clients' behalf.

Yours faithfully,

Supreme
Court of
Hong Kong

**LETTER FROM F. ZIMMERN & CO.
TO HWANG & CO.**

Hong Kong, 18th September, 1975

No. referred
to in the
agreed
bundle
146
Letter from
F. Zimmern
& Co. to
Hwang
& Co.
(25643)
18/9/75

Messrs. Hwang & Co.,
Solicitors,
Hong Kong.

Dear Sirs,

**Re: Agreement Memorial No. 811875
University Heights — I.L. 8171
Apt. A3 on 10th floor and car
parking space No. 7 on Deck A**

10

We acknowledge receipt of your letter of the 18th instant addressed to our clients, Chinachem Investment Co. Ltd. and in this connection, our clients have requested us to refer you to our letters to you both dated the 20th August, 1975.

We have advised our clients that the agreement between our respective clients is discharged as a result of its frustration thereof and pursuant to Clause 22 of the agreement, we enclose herewith our clients' cheque for the sum of \$20,850.00 being a refund of the deposit herein. Would you kindly acknowledge receipt.

Yours faithfully,

Supreme
Court of
Hong Kong

**LETTER FROM F. ZIMMERN & CO.
TO HWANG & CO.**

Hong Kong, 18th September, 1975

No. referred
to in the
agreed
bundle
147
Letter from
F. Zimmern
& Co. to
Hwang
& Co.
(25644)
18/9/75

Messrs. Hwang & Co.,
Solicitors,
Hong Kong.

Dear Sirs,

**Re: University Heights — I.L. 8171
Apt. A4 & A5 on 12th floor and
corresponding roof together with
car parking spaces No. 2 & 31 on
Deck "D" — Agreements Memorial
No. 832382 and 811026**

10

We acknowledge receipt of your letter of the 18th instant addressed to our clients, Chinachem Investment Co. Ltd. and in this connection, our clients have requested us to refer you to our letters to you both dated the 20th August, 1975.

We have advised our clients that the agreement between our respective clients is discharged as a result of its frustration thereof and pursuant to Clause 22 of the agreement, we enclose herewith our clients' cheque for the sum of \$53,270.00 being a refund of the deposit herein.

20

Would you kindly acknowledge receipt.

Yours faithfully,

Supreme
Court of
Hong Kong

**LETTER FROM SCOTT WILSON KIRKPATRICK & PARTNERS
TO DEFENDANT**

No. referred
to in the
agreed
bundle
148
Letter
S.W.K. & P.
to Defendant
18/9/75

**Chinachem Group
1001-3 Bank of Canton Building
Des Voeux Road Central
Hong Kong
Attn: Mr. C. H. Duff**

18th September, 1975

Dear Sirs,

12 Babington Path

10

As requested by Mr. Duff on 18th September 1975, enclosed please find two additional copies of our report dated July 1975.

Yours faithfully,
SCOTT WILSON KIRKPATRICK & PARTNERS

Supreme
Court of
Hong Kong

**COPY LETTER FROM HWANG & CO.
TO F. ZIMMERN & CO.**

No. referred
to in the
agreed
bundle
149
Copy letter
from
Hwang
& Co. to
F. Zimmern
& Co.
20/9/75

DQC/mn
JC/4763/75

20th September, 1975

Messrs. F. Zimmern & Co.,
Solicitors & Notaries,
Hong Kong.

Dear Sirs,

**Re: University Heights — 12 Babington Path
and Kotewall Road — I.L. 8171**

10

We refer to your letter dated the 18th instant (No. 25599) and wish to inform you that we have authority to accept service on behalf of all our clients except the following:—

1. Chan Kwan Sheung
2. Cheng Si Yic
Cheung Lai Sun, Juliana
3. Wong Man Tack
Lui Lai Ying
4. Lam Tsang Suk Yee
5. Tsang Suk Yee (Trustee)
Lam Kit Woo (Beneficiary)
6. Tsang Suk Yee (Trustee)
Lam Kit Ping (Beneficiary)

20

Yours faithfully,

Supreme
Court of
Hong Kong

**LETTER FROM F. ZIMMERN & CO.
TO HWANG & CO.**

Hong Kong, 20th September, 1975.

No. referred
to in the
agreed
bundle
150
Letter
from
F. Zimmern
& Co. to
Hwang
& Co.
20/9/75

Messrs. Hwang & Co.,
Solicitors,
Hong Kong.

Dear Sirs,

**Re: University Heights — I.L. 8171 Apt. "A4" on the 8th floor
and Car Parking Space No. 33 on Deck "A"
(Purchasers: Cheng Si Yic & another)
Agreement Memorial No. 811868**

10

We acknowledge receipt of your letter of the 18th instant.

In this connection, our clients have requested us to refer you to our letters to you both dated the 20th August, 1975.

We have advised our clients that the agreement between our respective clients is discharged as a result of its frustration thereof and pursuant to Clause 22 of the agreement, we enclose herewith our clients' cheque for the sum of \$20,460.00 being a refund of the deposit herein.

Would you kindly acknowledge receipt.

Yours faithfully,

20

Supreme
Court of
Hong Kong

**LETTER FROM HWANG & CO.
TO F. ZIMMERN & CO.**

23rd September, 1975

No. referred
to in the
agreed
bundle
151

DQC/LC
JC/4763/75(A)
JC/4763/75(B)

Letter from
Hwang
& Co. to
F. Zimmern
& Co.
23/9/75

Messrs. F. Zimmern & Co.,
Solicitors & Notaries,
Hong Kong.

WITHOUT PREJUDICE

Dear Sirs,

**Re: University Heights — 12 Babington Path
and Kotewall Road — I.L. 8171**

10

We refer to your two letters dated the 18th instant (Nos. 25643 and 25644) together with the enclosures therein.

We do not agree that the agreement between our respective clients is frustrated as stated in your letters dated the 20th August 1975. Accordingly, we have advised our clients to accept the respective sums of HK\$20,850.00 and HK\$53,270.00 only as a refund of deposit under Clause 3(2) of the agreement and on condition that the acceptance is without prejudice to our clients' right to claim interest under the said clause as stated in our letters dated the 18th instant.

Yours faithfully,

20

Supreme
Court of
Hong Kong

**LETTER FROM HWANG & CO.
TO F. ZIMMERN & CO.**

No. referred
to in the
agreed
bundle
152

DQC: CL
JC/4763/75

24th September, 1975

Letter from
Hwang
& Co. to
F. Zimmern
& Co.
24/9/75

Messrs. F. Zimmern & Co.,
Solicitors & Notaries,
Hong Kong.

Dear Sirs,

Re: University Heights — I.L. 8171

We acknowledge receipt of your letters of the 20th instant (Nos. 25098, 10
25700-25714, 25716-25720).

Our clients do not accept that the agreement has been frustrated as alleged or
at all and should be grateful if you would be kind enough to let us know:—

- (a) Whether your client intends to proceed with the development of the site;
- (b) If not, why not;
- (c) If so, the expected completion date.

In the circumstances prevailing at present our clients propose to exercise their
right to wait for completion and claim interest in the meantime on the deposits paid
in accordance with the agreement. Our clients contend that such interest is payable
monthly. This is of course entirely without prejudice to our clients' right to rescind 20
the agreement at any time after giving due notice e.g. if it should appear that your
client has no intention to proceed with the development of the site or if the completion
of the building is inordinately delayed.

Pending clarification of the position, we are holding to the cheques without
prejudice to our clients' rights.

Yours faithfully,

Supreme
Court of
Hong Kong

**LETTER FROM F. ZIMMERN & CO.
TO HWANG & CO.**

No. referred
to in the
agreed
bundle
153
Letter from
F. Zimmern
& Co. to
Hwang
& Co.
27/9/75

Messrs. Hwang & Co.,
Solicitors,
Hong Kong.

Hong Kong, 27th September, 1975

Dear Sirs,

Re: University Heights — I.L. 8171

We acknowledge receipt of your letter of the 24th instant.

Could you please treat our letters of the 20th ultimo as "open letters". 10

As your clients failed to accept one or the other offers contained in page 2 of our first letter of the 20th ultimo, the said offers are deemed withdrawn by virtue of our letters to you of the 20th instant.

Yours faithfully,

Supreme
Court of
Hong Kong

**LETTER FROM F. ZIMMERN & CO.
TO TSENG HING YU**

Hong Kong, 27th September, 1975.

No. referred
to in the
agreed
bundle
154
Letter from
F. Zimmern
& Co. to
Tseng
Hing Yu
(9th Plaintiff
in H.C.
2739/75)
27/9/75

Mr. Tseng Hing Yu
Nos. 61-65 Nam Cheong Street
(Wing On Bank Limited)
Kowloon.

REGISTERED POST

Dear Sir,

**Re: University Heights — I.L. 8171 Apt. "B4" on the 10th floor
and Car Parking Space No. 7 on Deck "D"
Agreement Memorial No. 811024**

10

We act for Chinachem Investment Company Limited, who on the 29th day of May 1971 entered into the above captioned Agreement for Sale and Purchase with you.

As you are no doubt aware, as a result of the land slides which occurred in the vicinity of the Kotewall Road area in 1972, Government has "frozen" all developments in the Kotewall Road area including I.L. No. 8171.

We have advised our clients that by virtue of the land slides in 1972 and the subsequent freezing of the subject development, the above-captioned agreement for sale and purchase is frustrated and the parties thereto are discharged from all liabilities arising out of and in connection with the agreement. 20

Pursuant to Clause 22 of the said Agreement, we have been instructed by our clients to send you herewith a Cashier Order in the sum of \$21,900.90 being a refund of the deposit(s) paid by you to our clients. Will you kindly acknowledge receipt.

Yours faithfully,

Supreme
Court of
Hong Kong

**LETTER FROM F. ZIMMERN & CO.
TO TO SAI MUI**

No. referred
to in the
agreed
bundle
155
Letter from
F. Zimmern
& Co. to To
Sai Mui
(21st Plaintiff
in H.C.
2739/75)
27/9/75

Hong Kong, 27th September, 1975

Madam. To Sai Mui,
No. 482, Queen's Road West,
10th floor (Front Portion),
Hong Kong.

REGISTERED POST

Dear Madam,

**Re: University Heights — I.L. 8171 Apt. A-3 on the 12th floor
and Car Parking Space No. 18 on Deck "B" and
Roof "A-3" Agreement Memorial No. 822804.**

10

We act for Chinachem Investment Company Limited, who on the 12th day of July 1971 entered into the above captioned Agreement for Sale and Purchase with you.

As you are no doubt aware, as a result of the land slides which occurred in the vicinity of the Kotewall Road area in 1972, Government has "frozen" all developments in the Kotewall Road area including I.L. No. 8171.

We have advised our clients that by virtue of the land slides in 1972 and the subsequent freezing of the subject development, the above-captioned agreement for sale and purchase is frustrated and the parties thereto are discharged from all liabilities arising out of and in connection with the agreement.

20

Pursuant to Clause 22 of the said Agreement, we have been instructed by our clients to send you herewith a Cashier Order in the sum of \$23,775.00 being a refund of the deposit(s) paid by you to our clients. Will you kindly acknowledge receipt.

Yours faithfully,

Supreme
Court of
Hong Kong

**LETTER FROM HWANG & CO.
TO F. ZIMMERN & CO.**

No. referred
to in the
agreed
bundle
156

DQC: CL
JC/4763/75

2nd October, 1975

Letter from
Hwang
& Co. to
F. Zimmern
& Co.
2/10/75

Messrs. F. Zimmern & Co.,
Solicitors & Notaries,
Hong Kong.

Dear Sirs,

**Re: University Heights — I.L. 8171 Apt. "B4" on the 10th floor
and Car Parking Space No. 7 on Deck "D"
Agreement Memorial No. 811024**

10

Your letter dated the 27th September 1975 addressed to Madam Tseng Hing Yu has been handed to us with instructions to reply thereto.

Our client does not accept that the agreement has been frustrated as alleged. In the circumstances prevailing at present, our client proposes to exercise her right to wait for completion and claim interest on the deposit paid in accordance with the agreement. In this connection, we would like to refer you to our letter to you dated the 24th September 1975. Accordingly, we are holding to the cheque without prejudice to our client's right as stated in the said letter.

Yours faithfully,

20

Supreme
Court of
Hong Kong

BUILDING AUTHORITY NOTICE OF DISAPPROVAL

No. referred
to in the
agreed
bundle
157
Building
Authority
letter of
Disapproval
3/10/75

Ref. BOO 3/2253/69

Charles H. Duff, Esq.,
2013, Connaught Centre,
Hong Kong.

3rd October, 1975

Dear Sir,

12 Babington Path & Kotewall Road — I.L. 8171

I refer to your application dated 15th September, 1975 for approval of proposals. 10

It is the usual practice in the Buildings Ordinance Office for all submission to be checked carefully to ensure that contraventions of the Buildings Ordinance and Regulations are not present and that from other aspects where the public interest is involved, the proposals are viable. However, the pressure of work in the Buildings Ordinance Office is such that this usual practice cannot be followed without most serious delays continuing to affect all submissions to the B.O.O. Therefore, your application has been checked on the basis of certain elementary checks only but this elementary checking has disclosed that

(Please see overleaf)

and your proposal therefore is disapproved. 20

This curtailment of the usual range of checks emphasizes your duties and responsibilities as Authorised Person and I must stress the importance the Building Authority attaches to the proper assumption of responsibility by Authorised Persons. It is self-evident that any alteration to a building during erection or on completion, costs money and causes delays. Where the Building Authority is of the opinion that an Authorised Person has failed in his duty appropriate action will be taken.

Please ensure, therefore, that a re-submission complies fully with the Buildings Ordinance and Regulations, and that all relevant information is attached.

Yours faithfully,
(Sd.) K. B. Leung
pro Building Authority. 30

Supreme
Court of
Hong Kong

No. referred
to in the
agreed
bundle
157
Building
Authority
letter of
Disapproval
3/10/75
(Contd.)

- 2.1 Water pressure was not considered in the calculations — Regulation 5, Building (Construction) Regulations 1975.
- 2.2 Details of the filter media were not shown on the drawings, nor were placing proposal details given — Regulation 172(2), Building (Construction) Regulations 1975.
- 2.3 Weep holes should be at rate of 1 per 4 sq. yd. — Regulation 172(1), Building (Construction) Regulations 1975.
- 2.4 A surcharge load on the slope should be considered — Regulation 5, Building (Construction) Regulations 1975.
- 2.5 The factor of safety against overturning of the caisson retaining wall should be given — Regulation 167(2), Building (Construction) Regulations 1975. 10
- 2.6 Reinforcing bars in the caissons should be provided in accordance with the design calculations. Steel details in the manner with butt joints as shown cannot account for the steel areas as calculated — Regulation 5, Building (Construction) Regulations 1975.
- 2.7 Loads of columns CA28, CA29, CA30 and CA34 taken in the design of caissons do not agree with those taken in the design of the superstructure — Regulation 5, Building (Construction) Regulations 1975.
5. If you wish to discuss any of the items 2.1 to 2.5 above, please contact the Civil Engineering Unit of this office. 20
6. While our Civil Engineering Unit offer no adverse comments on the working procedure in general, before consent you should have a note added on the plans to the effect that water must not be allowed to enter into the caisson excavations. How this is to be achieved should also be indicated.
7. Your plans and calculations are returned to you herewith.

Supreme
Court of
Hong Kong

**LETTER FROM PUBLIC WORKS DEPARTMENT
TO HWANG & CO.**

4th October 1975.

No. referred
to in the
agreed
bundle
158
Letter from
Public
Works
Department
to Hwang
& Co.
4/10/75

Messrs. Hwang & Co.,
306 Realty Building,
71 Des Voeux Road Central,
Hong Kong.

Dear Sirs,

12 Babington Path & Kotewall Road — I.L. 8171

In reply to your letter dated 27th August 1975 I am to inform as follows:— 10

- 1) The authorised person had submitted amended site formation/access road plans on 11th July 1975, 11th August 1975 and 20th September 1975. They are now being processed by this office.
- 2) Although the A/P has submitted the amended site formation and access road plans and applied for consent to commence work but such consent will not be given until the amended plans are approved. However, some preparatory site works have been allowed, in order to prepare work to be carried out in the event of approval being given to the plans and consent issued.
- 3) This project is not subject to the Temporary Restriction of Building Development (Mid-levels) Ordinance 1973 since plans were first submitted on 23rd June 1970 and approved on 8th September 1970. That Ordinance only governs submissions after 4th July 1973. 20

I regret the delay in replying.

Yours faithfully,
(Sd.) J. HSI
pro. Building Authority.

Supreme
Court of
Hong Kong

**LETTER FROM PUBLIC WORKS DEPARTMENT
TO BERNARD WONG & CO.**

No. referred
to in the
agreed
bundle
225

4th October, 1975.

Your Ref. BW 2652/71

Letter from
Public
Works
Department
to Bernard
Wong & Co.
4/10/75

Messrs. Bernard Wong & Co.,
Room 1101 Takshing House,
11th floor,
20 Des Voeux Road Central,
Hong Kong.

Dear Sirs,

10

12 Babington Path & Kotewall Road — I.L. 8171

I refer to your letter dated 30th September 1975 regarding the proposed development at the above address.

Building works had been suspended since 1972 landslide. There are some recent activities in this site in that some preparatory site works have been carrying out and in the meantime amended site formation and access road plans submitted for approval are being processed by this office. Consent to commence their building work will be issued when these plans are approved and the necessary application has been made.

I wish to confirm that the above project is not subject to the Temporary Restriction of Building Development (Mid-levels) Ordinance 1973 as plans were first submitted to this office on 23rd June 1970. That Ordinance relates only to these submissions after 4th July 1973. 20

Yours faithfully,
(Sd.) J. HSI
pro. Building Authority.

Supreme
Court of
Hong Kong

**COPY LETTER FROM BUILDING AUTHORITY
TO C. H. DUFF**

No. referred
to in the
agreed
bundle
159
Copy letter
Building
Authority to
C.H. Duff
16/10/75

16th October, 1975.

Charles H. Duff, Esq.,
2013 Connaught Centre,
Hong Kong.

Dear Sir,

12 Babington Path & Kotewall Road — I.L. 8171

I hereby refuse my consent to the commencement of the caisson works described in your application form dated 15th September, 1975 and received in this office on 18th September, 1975. 10

2. My grounds for refusing consent are:—

Your relevant caisson plans have been disapproved and have already been returned to you — Section 16(3)(a), Buildings Ordinance.

3. Your Form 13 (also not duly filled in) is returned herewith.

Yours faithfully,
(Sd). R. Tsao
pro Building Authority.

Supreme
Court of
Hong Kong

**COPY LETTER FROM C. H. DUFF
TO BUILDING AUTHORITY**

No. referred
to in the
agreed
bundle
160
Copy letter
C.H. Duff
to Building
Authority
21/10/75

Ref. BOO 3/2253/69

The Building Authority,
Public Works Department,
Murray Building,
Garden Road,
Hong Kong.

21st October, 1975.

Dear Sir,

10

**12 Babington Path & Kotewall Road
I.L. 8171**

I resubmit herewith caisson plans with relevant calculations for the above project, revised in accordance with your letter of 3rd October 1975, except for the following items:—

2.1 With the provision of an adequate number of weep holes backed by a 12" thick filter medium there will now be no need to consider water pressure.

2.2 Details of filter media have now been given but placing proposals, both for facing wall and filter medium, with details of any necessary shoring etc., will be fully given prior to my application for consent to proceed with the next stage of the work. 20

2.4 Since there will be no access to the slope above the retaining wall, except for maintenance, there is little likelihood of any appreciable surcharge load ever being imposed upon it. The structure has been very conservatively designed and I am satisfied that it will be quite safe to make no special provision for this small load.

2.5 The calculations dealing with the factor of safety of the retaining structure against overturning are given on page No. 16 (with supporting calculations on preceding pages) of Appendix V of the Addendum Report of April 1975 (amended June 1975) by Scott Wilson Kirkpatrick & Partners, of which you already have copies. I consider the factor of safety against overturning to be more than adequate. 30

Yours faithfully,
(Sd.) Charles H. Duff

Supreme
Court of
Hong Kong

**LETTER FROM HWANG & CO.
TO F. ZIMMERN & CO.**

21st October, 1975

No. referred
to in the
agreed
bundle

DQC: CL
JC/4763/75

161

Letter from
Hwang
& Co. to
F. Zimmern
& Co.
21/10/75

Messrs. F. Zimmern & Co.,
Solicitors & Notaries,
Hong Kong.

Dear Sirs,

**Re: University Heights — I.L. 8171 Apt. "A3" on the 12th floor
and Car Parking Space No. 18 on Deck "B" and Roof "A3"
Agreement Memorial No. 822804**

10

Your letter dated the 27th September 1975 addressed to Madam To Sai Mui has been handed to us with instructions to reply thereto.

Our client does not accept that the agreement has been frustrated as alleged. In the circumstances prevailing at present, our client proposes to exercise her right to wait for completion and claim interest on the deposit paid in accordance with the agreement. In this connection, we would like to refer you to our letter to you dated the 24th September 1975. Accordingly, we are holding to the cheque without prejudice to our client's right as stated in the said letter.

Yours faithfully,

20

Supreme
Court of
Hong Kong

**COPY LETTER FROM HWANG & CO.
TO F. ZIMMERN & CO.**

No. referred
to in the
agreed

JC/4763/75

5th November, 1975

bundle

162

Letter from

Hwang

& Co. to

F. Zimmern

& Co.

5/11/75

Messrs. F. Zimmern & Co.,
Solicitors & Notaries,
Hong Kong.

Dear Sirs,

**Re: University Heights — 12 Babington Path
and Kotewall Road — I.L. 8171**

Further to our letters dated 24th September 1975, 2nd October 1975 and 21st 10
October 1975, we return to you herewith the relevant Cashier Orders in respect of the
above matter.

Yours faithfully,

Supreme
Court of
Hong Kong

BUILDING AUTHORITY APPROVAL

13th November, 1975

No. referred
to in the
agreed
bundle
163
Building
Authority
Approval
13/11/75

Charles H. Duff, Esq.,
2013 Connaught Centre,
Hong Kong

Dear Sir:

12 Babington Path & Kotewall Road — I.L. 8171

Your structural details for the above refer.

2. In view of the use of Quality 'A' concrete in the above building works, you are required after the commencement of such works to submit copies of concrete test cube reports in accordance with the First Schedule attached to the Building (Construction) Regulations 1975. 10
3. You are reminded of para. 4(a) of Circular Letter No. 36 that certificates of origin and test results of the reinforcing steel intended for this job should be submitted.

Yours faithfully,
(R. Tsao)
pro Building Authority

Supreme
Court of
Hong Kong

No. referred
to in the
agreed
bundle
164
Building
Authority
letter of
Approval
13/11/75

BUILDING AUTHORITY NOTICE OF APPROVAL

Charles H. Duff, Esq.,
2013 Connaught Centre,
Hong Kong.

13th November, 1975.

Dear Sir,

12 Babington Path & Kotewall Road — I.L. 8171

I refer to your application dated 21st October, 1975 for approval of proposals.

It is the usual practice in the Buildings Ordinance Office for all submissions to be checked carefully to ensure that contraventions of the Buildings Ordinance and Regulations are not present and that from other aspects where the public interest is involved, the proposals are viable. However, the pressure of work in the Buildings Ordinance Office is such that this usual practice cannot be followed without most serious delays continuing to affect all submissions to the B.O.O. Therefore, while your application has been checked on the basis of certain elementary checks (and on this basis I am satisfied that your proposals may be approved) the full range of usual checking has not been carried out. 10

The curtailment of the usual range of checks emphasizes your duties and responsibilities as Authorised Person and I must stress the importance the Building Authority attaches to the proper assumption of responsibility by Authorised Person. It is self-evident that any alteration to a building during erection or on completion, costs money and causes delays. Where the Building Authority is of the opinion that an Authorised Person has failed in his duty appropriate action will be taken. 20

Form 12 indicating approval to your proposals, and one set of plans are enclosed herewith. Will you please draw the contents of this letter to the attention of your client?

Yours faithfully,
(Sd.) R. Tsao
pro Building Authority.

Supreme Court of Hong Kong

No. referred to in the agreed bundle 164
Approval of caisson retaining wall, caisson and caisson cap plan 13/11/75 (Contd.)

GOVERNMENT OF HONG KONG.

Form 12.

BUILDINGS ORDINANCE.

(Chapter 123).

Section 14.

BUILDING (ADMINISTRATION) REGULATIONS.

Regulation 30(1)(a).

Approval of Plans.

B.O.O. Ref. No. 3/2253/69.
To: Mr. Charles R. Soff,
2013 Cornough Centre,
Hong Kong.

OFFICE OF THE BUILDING AUTHORITY.

13th November, 1975.

The caisson retaining wall, caisson &
caisson cap

plans attached hereto, on which I have signified my approval, are hereby approved.

(No. and Name of Street) 12 Babington Path & Kettwell Road
on (Lot No./Permit Area No.) 14. 8171

2. Your attention is drawn to subsection (2) of section 14 of the Buildings Ordinance, which provides that the giving by the Building Authority of his approval to any plans shall not exempt any person from the necessity of obtaining the consent of the Building Authority to the commencement and carrying out of the caisson, caisson cap & retaining wall works shown on such plans. This approval does NOT authorize the commencement or carrying out of any caisson, caisson cap & retaining wall works.

H. H. Ho
pro. Building Authority.

Supreme
Court of
Hong Kong

**LETTER FROM BUILDING AUTHORITY
TO C. H. DUFF**

No. referred
to in the
agreed
bundle
165
Letter
Building
Authority to
C.H. Duff
and
Form 14
with en-
dorsements
24/11/75

Mr. Charles Duff,
2013 Connaught Centre,
Hong Kong.

24th November 1975.

Dear Sir,

**12 Babington Path & Kotewall Road
I.L. 8171**

Please find enclosed form 14 which has been endorsed to include the caisson 10 retaining wall and caisson plans which were approved on 13th November 1975.

This endorsement also serves to raise my Notice No. C 3/HKW/75 issued on 23rd August 1975.

Yours faithfully,
(Sd.) P. H. Hayward
pro Building Authority.

Supreme Court of Hong Kong

No. referred to in the agreed bundle 165 Letter Building Authority to C.H. Duff and Form 14 with endorsements 24/11/75 (Contd.)

B.A. 14 (a) 6120814
30x200-18/70-244834

GOVERNMENT OF HONG KONG.

Form 14.

23 ... 1972

BUILDINGS ORDINANCE.

(Chapter 123).

Section 14.

BUILDING (ADMINISTRATION) REGULATIONS.

Regulation 32.

12 JAN 1972

Consent to the commencement and carrying out of building works or part of any building works or of street works.

Permit No. BA 606/71

B.O.O. Ref. No. 2233/69

To: Chinachem Investment Co., Ltd.,
c/o Mr. L. H. Shuff,
539 Alexandra House,
Hong Kong.

OFFICE OF THE BUILDING AUTHORITY.

17th November 1971

I hereby consent to the commencement and carrying out of the following works—

Building works

at (No. and Name of Street) ... 12 Babington Path & Kowloon Road
on (Lot No./Permit Area No.) ... 11/171

2. The above ... works are to be carried out in accordance with the following plans, which have been approved by me and which have been returned to Mr. L. H. Shuff, authorized architect, and in compliance with the Buildings Ordinance and the regulations made thereunder and in accordance with Permit No. ... issued under Section 42 of the Buildings Ordinance.

B.O.O. Reference	Plans	Date of Notice of Approval	Consent Date	Signature	Consent Renewed	Signature
3/2253/69	COISSON RETAINING WALL & COISSON	13/11/75	21/11/75	[Signature]		

3. Your attention is drawn to the provisions of Section 14(2) of the Buildings Ordinance, and before commencing the above ... works you should ascertain that they will not contravene the provisions of any enactment or the requirements of any authority or the terms, or conditions of any Crown lease, licence or permit.

[Signature]
pro. Building Authority.

BA 606/71
27-11-71

Supreme
Court of
Hong Kong

No. referred
to in the
agreed
bundle
166
Copy
Building
Authority
Form 16
26/11/75

GOVERNMENT OF HONG KONG.

Form 16.

BUILDING (ADMINISTRATION) REGULATIONS.

Regulation 20.

Notice of appointment of registered contractor, undertaking
by registered contractor and notice of commencement
of building works or street works.

To the Building Authority,

.. 20th November 1975 ..

In accordance with the provisions of regulation 20 of the Building (Administration) Regulations—

(a) I/we, Charles H. Duff
authorized architect appointed in respect of the building/street* works at—

(i) number and name of street and locality .. 12 Babington Path & Kotewall Road ..

(ii) lot number with details of any section or subsection of the lot ... I.L. 8171 ..

to the carrying out of which you gave/renewed* your consent by Permit No. BA606/71 ..

B.O.O. Ref. No. 2253/69 on 24th November 1975 ..

hereby give you notice that the person for whom the building works/street works* are to be carried
out has appointed ... CHI FUNG COMPANY LIMITED ..
(Name of registered contractor).

of ... Rm. 1001-3 Bank of Canton Building, 6 Des Voeux Road, G., H.K. ..
(Address).

to be registered contractor in respect thereof and that the said works will be commenced/resumed*
on 27th November 1975 ..

CHARLES H. DUFF
REGISTERED ARCHITECT
HONG KONG

Signature of authorized architect.

And

(b) I/we, the said ... CHI FUNG INVESTMENT CO. LTD., registered contractor,
registration certificate number ... 1395 confirm that I/we have been appointed to carry out
the above described building/street* works and I/we hereby undertake to carry out the above works in
strict compliance with the Buildings Ordinance and regulations made thereunder.

Signature of registered contractor.

* Delete whichever is inapplicable.

Supreme
Court of
Hong Kong

**COPY LETTER FROM C. H. DUFF
TO BUILDING AUTHORITY**

No. referred
to in the
agreed
bundle
175
Copy letter
C.H. Duff
to Building
Authority
9/1/76

The Building Authority,
Public Works Department,
Murray Building,
Garden Road,
Hong Kong.

9th January, 1976.

Dear Sirs,

12 Babington Path & Kotewall Road — I.L. 8171

I submit herewith plans and calculations for the proposed underpinning of the foundations at the north side of the lower block which I trust you will find self-explanatory. 10

During the last 6 months of 1972 (immediately after the Po Shan Road land slip when the site was occupied by the P.W.D.), the northern side of the lower block foundation — then under construction — was subject to a certain amount of scouring action due to the unchanneled run-off from the heavy rains. This, coupled with the fact that the Government contractor had excavated earth from the area immediately adjoining these foundations (used as filling for the emergency temporary access road from Babington Path) resulted in the deterioration of some of the foundation bearing areas at their outer edges. The proposed underpinning is designed completely to protect and to restore the foundation to a satisfactory condition. 20

In view of the importance of completing this work before the advent of the rainy season I look forward to your early approval. An additional plan and set of calculations are forwarded herewith to enable your two engineering offices to examine this proposal concurrently.

Yours faithfully,
(Sd.) Charles H. Duff

Supreme
Court of
Hong Kong

**COPY LETTER FROM C. H. DUFF
TO BUILDING AUTHORITY**

No. referred
to in the
agreed
bundle
176
Copy letter
C.H. Duff
to Building
Authority
(with copy
Form 13
annexed)
16/1/76

B.O.O. Ref.: 3/2253/69

The Building Authority,
Public Works Department,
Murray Building,
Garden Road,
Hong Kong.

16th January, 1976.

Dear Sir,

10

**12 Babington Path & Kotewall Road,
I.L. 8171**

After the underpinning work, (referred to in my letter of 9th January, 1976) has been completed, it will be necessary to proceed immediately with the back-filling of the adjoining area because it is essential that this work also be completed before the rainy season.

The back-filling cannot be done until the light columns in this area (for supporting the parking deck) have been carried up to the level of the main foundation. The spread footings for these light columns are already in place, having been cast in 1972.

20

Accordingly I enclose form 13 requesting your consent for commencement of the superstructure of the lower block, together with original form 14 for your endorsement please.

Yours faithfully,
(Sd.) Charles H. Duff

Supreme Court of Hong Kong

P.W.D.-B.A. 11 (S.) 6120013
S.OO-10/70-BU6835

No. referred to in the agreed bundle 176
Copy letter C.H. Duff to Building Authority (with copy Form 13 annexed) 16/1/76 (Contd.)

GOVERNMENT OF HONG KONG.

Form 13.

BUILDINGS ORDINANCE.

(Chapter 123).

Section 14.

BUILDING (ADMINISTRATION) REGULATIONS.

Regulation 31.

Application for consent to the commencement and carrying out of building works or part of building works or of street works.

16th January, 76.

....., 19.....

To the Building Authority,

CHARLES H. DUFF

~~xxxx~~
I/we, (name of applicant in block letters)

apply for your consent to the commencement and carrying out of the following works (here specify the type of work, e.g. building works or street works or, if the application is in respect of part only of building works, specify the part in respect of which the application is made) —

..... 12 Babington Path & Kotewall Road

at (No. and name of street) I.L. 8171

on (Lot No./Permit Area No.)

1. The following plans of the above works have been approved by you—

Plans.	Date of notice of approval.	B.O.O. Ref. No.
Spread Footing (For main Building) —	17-11-71	3/2253/69
Building	7- 1-72	2/2253/69
building (Amendments)	7- 1-72	2/2253/69
Structural (For main Building)	7- 1-72	3/2253/69
Temp Structure & Part Retaining Wall for Access Road	3- 3-72	3/2253/69
Drainage	2- 6-72	4/2253/69
Caisson Retaining Wall & Caisson	21-11-75	3/2253/69
.....
.....

3. *The certificate, Form 10, required by regulation 17 of the Building (Administration) Regulations, in connexion with the proposed structural use of steel and/or reinforced concrete, was submitted on 19.....

4. *The certificate (stability certificates) required by regulation 18 of the Building (Administration) Regulations was submitted on 16 Jan 76

.....
Signature of applicant.
16th January 76.
....., 19.....

* Delete if not applicable.

Supreme
Court of
Hong Kong

**COPY LETTER FROM C. H. DUFF TO BUILDING AUTHORITY
WITH COPY BUILDING AUTHORITY FORM 13**

No. referred
to in the
agreed
bundle
177
Copy letter
C.H. Duff
to Building
Authority
with copy
Building
Authority
Form 13
28/1/76

The Building Authority,
Public Works Department,
Murray Building,
Garden Road,
Hong Kong.

28th January, 1976.

Dear Sir,

12 Babington Path & Kotewall Road, I.L. 8171

10

With reference to your letter of 24th January, 1976, and further to my conversation with Mr. K. S. So, I submit herewith form 13 together with plans indicating the proposed working procedure and earth-cutting profiles. I believe you will agree that the proposed procedure obviates the necessity for any shoring.

Your early consent to commence work will be greatly appreciated.

Yours faithfully,
(Sd.) Charles H. Duff

Supreme Court of Hong Kong

No. referred to in the agreed bundle 177
Copy letter C.H. Duff to Building Authority with copy Building Authority Form 13 28/1/76 (Contd.)

GOVERNMENT OF HONG KONG.

Form 13.

BUILDINGS ORDINANCE.

(Chapter 123).

Section 14.

BUILDING (ADMINISTRATION) REGULATIONS.

Regulation 31.

Application for consent to the commencement and carrying out of building works or part of building works or of street works.

28th January, 1976

To the Building Authority,

I/We, (name of applicant in block letters)

Charles H. Duff CHARLES H. DUFF.

apply for your consent to the commencement and carrying out of the following works (here specify the type of work, e.g. building works or street works or, if the application is in respect of part only of building works, specify the part in respect of which the application is made) —

Spread footings (Amendments)
at (No. and name of street) *12 Belington Park & Kowloon Road.*
on (Lot No./Permit Area No.) *L.L. 8171*

1. The following plans of the above works have been approved by you—

Plans.	Date of notice of approval.	B.O.O. Ref. No.
<i>Spread footings (Amendments)</i>	<i>24 January, 1976</i>	<i>3/2553/69</i>

3. *The certificate, Form 10, required by regulation 17 of the Building (Administration) Regulations, in connexion with the proposed structural use of steel and/or reinforced concrete, was submitted on *15th September*, 1975.

4. *The certificate (stability certificates) required by regulation 18 of the Building (Administration) Regulations was submitted on 19.....

Signature of applicant.

28 January, 1975

* Delete if not applicable.

Supreme
Court of
Hong Kong

**LETTER FROM BUILDING AUTHORITY
TO C. H. DUFF**

No. referred
to in the
agreed
bundle
178
Letter
Building
Authority to
C.H. Duff
24/1/76

24th January, 1976.

Charles H. Duff, Esq.,
2013 Connaught Centre,
Hong Kong.

Dear Sir,

12 Babington Path & Kotewall Road — I.L. 8171

Your foundation underpinning details for the above are approved as per letter and Form 12 attached. 10

2. As conditions to such approval in accordance with item 7 in the schedule to Section 17(1) of the Buildings Ordinance, you are required to carry out the work in suitable stages and to provide adequate shoring to the excavations to safeguard their stability during the construction period. An acceptable shoring plan is to be submitted to this office before consent to commence the above works will be given.

3. Your attention is drawn to Regulations 8 and 28 of the Building (Construction) Regulations 1975.

Yours faithfully,
(Sd.) R. Tsao
pro. Building Authority

20

Supreme
Court of
Hong Kong

**PRINTED LETTER FROM BUILDING AUTHORITY TO C. H. DUFF
WITH BUILDING AUTHORITY FORM 12
(approval of plan)**

No. referred
to in the
agreed
bundle
179
Printed
letter
Building
Authority to
C.H. Duff
with
Building
Authority
Form 12
(approval of
Plan)
24/1/76

Charles H. Duff Esq.,
2013 Connaught Centre,
Hong Kong.

24th January, 1976.

Dear Sir,

12 Babington Path & Kotewall Road — I.L. 8171

I refer to your application dated 9th January, 1976 for approval of proposals. 10

It is the usual practice in the Buildings Ordinance Office for all submissions to be checked carefully to ensure that contraventions of the Buildings Ordinance and Regulations are not present and that from other aspects where the public interest is involved, the proposals are viable. However, the pressure of work in the Buildings Ordinance Office is such that this usual practice cannot be followed without most serious delays continuing to affect all submissions to the B.O.O. Therefore, while your application has been checked on the basis of certain elementary checks (and on this basis I am satisfied that your proposals may be approved) the full range of usual checking has not been carried out.

The curtailment of the usual range of checks emphasizes your duties and responsibilities as Authorised Person and I must stress the importance the Building Authority attaches to the proper assumption of responsibility by Authorised Person. It is self-evident that any alteration to a building during erection or on completion, costs money and causes delays. Where the Building Authority is of the opinion that an Authorised Person has failed in his duty appropriate action will be taken. 20

Form 12 indicating approval to your proposals, and one set of plans are enclosed herewith. Will you please draw the contents of this letter to the attention of your client?

Yours faithfully,
(Sd.) R. Tsao
pro. Building Authority.

30

Supreme Court of Hong Kong

GOVERNMENT OF HONG KONG.

Form 12.

BUILDINGS ORDINANCE.

(Chapter 123).

Section 14.

BUILDING (ADMINISTRATION) REGULATIONS.

Regulation 30(1)(a).

Approval of Plans.

No. referred to in the agreed bundle 179
Printed letter Building Authority to C.H. Duff with Building Authority Form 12 (approval of Plan) 24/1/76 (Contd.)

B.O.O. Ref. No. 3/2253/69
To: Mr. Charles N. Duff,
2013 Lunnghat Centre,
Hong Kong.

OFFICE OF THE BUILDING AUTHORITY.

24th January, 1976.

The spread footings (amendments)

plans attached hereto, on which I have signified my approval, are hereby approved.

(No. and Name of Street) 12 Babington Path & Katerwall Road
on (Lot No./Permit Area No.) 1-L. 8971

2. Your attention is drawn to subsection (2) of section 14 of the Buildings Ordinance, which provides that the giving by the Building Authority of his approval to any plans shall not exempt any person from the necessity of obtaining the consent of the Building Authority to the commencement and carrying out of the spread footing works shown on such plans. This approval does NOT authorize the commencement or carrying out of any spread footing works.

HCH
pro. Building Authority.

Supreme
Court of
Hong Kong

**COPY LETTER FROM C. H. DUFF
TO BUILDING AUTHORITY**

No. referred
to in the
agreed
bundle
180
Copy letter
C.H. Duff
to Building
Authority
17/2/76

The Building Authority,
Public Works Department,
Murray Building,
Garden Road,
Hong Kong.

17th February, 1976

Dear Sir,

**12 Babington Path & Kotewall Road
I.L. 8171**

10

I refer to my letter of 16th January, 1976 and to my subsequent conversation with Mr. C. K. Lau wherein I was informed that consent for commencement of the superstructure of the lower block could not be granted until acceptable site formation plans (showing working procedure) had been submitted and approved. Such plans are now submitted herewith.

You will note that all footings already cast (in 1972) are to be removed and recast on mass concrete bases, which will bear on the ground at levels two feet lower than those shown on the approved plans. This additional depth will ensure that the recast footings will rest on undisturbed ground.

20

Yours faithfully,
(Sd.) Charles H. Duff

Supreme
Court of
Hong Kong

**COPY LETTER FROM C. H. DUFF
TO BUILDING AUTHORITY**

No. referred
to in the
agreed
bundle
181
Copy letter
C.H. Duff
to Building
Authority
17/2/76

The Building Authority,
Public Works Department,
Murray Building,
Garden Road,
Hong Kong.

17th February, 1976.

Dear Sir,

**12 Babington Path & Kotewall Road
I.L. 8171**

10

Caisson retaining wall and caisson plan, approved on 13th November 1975 refers.

Notes Nos. 1, 2, 3 and 9 on drawing No. 1/3 describe the requirements normally associated with load bearing caissons where the caissons carry loads closely approaching their full capacity.

In the present case the load carried by each caisson is only nominal as compared with its full capacity and the conditions specified in these notes are therefore not applicable. These notes are therefore appropriately amended and the caisson loading schedule on drawing No. 2/3 revised accordingly.

20

Yours faithfully,
(Sd.) Charles H. Duff

Supreme
Court of
Hong Kong

**LETTER FROM BUILDING AUTHORITY
TO C. H. DUFF**

14th February, 1976

No. referred
to in the
agreed
bundle
183
Letter
Building
Authority to
C.H. Duff
14/2/76

Charles H. Duff, Esq.,
2013 Connaught Centre,
Hong Kong.

Dear Sir,

12 Babington Path & Kotewall Road — I.L. 8171

I refer to your letter of 16th January 1976 and the Forms 13 and 14 accompanied, applying for consent to commence the work on the superstructure of the lower block. 10

2. You are advised that your application is refused under Section 16(3)(b) of the Buildings Ordinance in that an acceptable shoring plan as required by my letter dated 24th January 1976 has not been submitted and the consent for commencement of foundation underpinning work has not been granted.

3. Your attention is also drawn to Section 20(2) of the Buildings Ordinance and you are advised that in future if you wish to resume the work of which consent has been given but are not commenced within three months thereof, you should submit a Form 15 instead of a Form 13.

4. Your Forms 13 and 14 are therefore returned. 20

Yours faithfully,
(Sd.) P. H. Hayward
pro. Building Authority.

Supreme
Court of
Hong Kong

**LETTER FROM C. H. DUFF TO BUILDING AUTHORITY
WITH FORM 13**

No. referred
to in the
agreed
bundle
184
Letter
C.H. Duff
to Building
Authority
with
Form 13
1/3/76

Your Ref. : B.O.O. 3/2253/69

The Building Authority,
Public Works Department,
Murray Building,
Garden Road,
Hong Kong.

1st March, 1976.

Dear Sir,

10

**12 Babington Path — Kotewall Road
I.L. 8171**

I resubmit herewith plans showing site formation for construction of spread footings to the lower block.

The work is now to be done in two stages which I believe is an improvement in view of the approaching rainy season. The additional sections requested by Mr. Pitt Jones have been added.

I enclose a form 13 and look forward to your early consent for commencement of this work.

Yours faithfully,
(Sd.) Charles H. Duff

20

GOVERNMENT OF HONG KONG.

Form 13.

BUILDINGS ORDINANCE.

(Chapter 123).

Section 14.

BUILDING (ADMINISTRATION) REGULATIONS.

Regulation 31.

Application for consent to the commencement and carrying out of building works or part of building works or of street works.

No. referred to in the agreed bundle 184
Letter C.H. Duff to Building Authority with Form 13 1/3/76 (Contd.)

1st March, 1976.

To the Building Authority,

I/We, (name of applicant in block letters) CHARLES H. DUFF
apply for your consent to the commencement and carrying out of the following works (here specify the type of work, e.g. building works or street works or, if the application is in respect of part only of building works, specify the part in respect of which the application is made)
Spread Footing - Lower Block (underpinning)
at (No. and name of street) 12 Babington Path - Kotewall Road
on (Lot No./Permit Area No.) I.L. 8171

1. The following plans of the above works have been approved by you—

Plans,	Date of notice of approval.	B.O.O. Ref. No.
Spread Footings - Lower Block underpinning		3/2253/69

3. *The certificate, Form 10, required by regulation 17 of the Building (Administration) Regulations, in connexion with the proposed structural use of steel and/or reinforced concrete, was submitted on

4. *The certificate (stability certificates) required by regulation 18 of the Building (Administration) Regulations was submitted on DUFF

Signature of applicant.

* Delete if not applicable.

Supreme
Court of
Hong Kong

**LETTER FROM C. H. DUFF
TO BUILDING AUTHORITY WITH FORM 13**

No. referred
to in the
agreed
bundle
185
Letter
C.H. Duff
to Building
Authority
with
Form 13
2/3/76

Your File No. B.O.O. 3/2253/69

The Building Authority,
Public Works Department,
Murray Building,
Garden Road,
Hong Kong.

2nd March, 1976.

Dear Sir,

10

**12 Babington Path & Kotewall Road
I.L. 8171**

The plans submitted with my letter of 28th January 1976, which were subsequently withdrawn by me for minor amendments, are resubmitted herewith.

You already have my application to commence work (Form 13) and I now enclose the original Form 14 for endorsement please.

Yours faithfully,
(Sd.) Charles H. Duff

Supreme Court of Hong Kong

No. referred to in the agreed bundle 185 Letter C.H. Duff to Building Authority with Form 13 2/3/76 (Contd.)

GOVERNMENT OF HONG KONG.

Form 13.

BUILDINGS ORDINANCE.

(Chapter 123).

Section 14.

BUILDING (ADMINISTRATION) REGULATIONS.

Regulation 31.

Application for consent to the commencement and carrying out of building works or part of building works or of street works.

16th January, 1976.

To the Building Authority,

I/We (name of applicant in block letters) CHARLES H. DUFF renewal of apply for your consent to the commencement and carrying out of the following works (here specify the type of work, e.g. building works or street works or, if the application is in respect of part only of building works, specify the part in respect of which the application is made) Superstructure - Lower Block at (No. and name of street) 12 Babington Path & Kotewall Road on (Lot No./Permit Area No.) I.L.A. 8171

1. The following plans of the above works have been approved by you—

Table with 3 columns: Plans, Date of notice of approval, B.O.O. Ref. No. Rows include Spread Footing, building, building (Amendments), Structural, Ramp Structure & Part Retaining Walls, Drainage, Caisson Retaining Wall & Caisson.

3. *The certificate, Form 10, required by regulation 17 of the Building (Administration) Regulations, in connexion with the proposed structural use of steel and/or reinforced concrete, was submitted on 18.12.76, 19.76

4. *The certificate (stability certificates) required by regulation 18 of the Building (Administration) Regulations was submitted on 14.1.76, 14.76

Signature of applicant.

16th January, 1976.

* Delete if not applicable.

Supreme
Court of
Hong Kong

**LETTER FROM BUILDING AUTHORITY TO C. H. DUFF
WITH FORM 13**

No. referred
to in the
agreed
bundle
186
Letter
Building
Authority to
C.H. Duff
with
Form 13
3/3/76

Ref: BOO 3/2253/69

Charles H. Duff, Esq.,
2013 Connaught Centre,
Hong Kong.

3rd March, 1976

Dear Sir,

12 Babington Path & Kotewall Road — I.L. 8171

I hereby refuse my consent to the commencement of the spread footing amend- 10
ments work described in your application form dated 28th January 1976 and received
in this office on 9th February 1976.

2. My grounds for refusing consent are:—

The requirements as set out in paragraph 2 in my letter of 24th January 1976
referring to the approval of your foundation underpinning details have not
been satisfactorily fulfilled or dealt with. Your working procedure and site
formation proposals for the above works submitted to this office on 9th February
1976 and 18th February, 1976 were not found satisfactory and were withdrawn
by you on 24th February 1976.

— Item 7 in the Schedule to Buildings Ordinance Section 17(1) — 20

3. Your Form 13 is returned herewith.

Yours faithfully,
(Sd). R. Tsao
pro. Building Authority

Supreme Court of Hong Kong

No. referred to in the agreed bundle 186 Letter Building Authority to C.H. Duff with Form 13 3/3/76 (Contd.)

GOVERNMENT OF HONG KONG.

Form 13.

BUILDINGS ORDINANCE.

(Chapter 123).

Section 14.

BUILDING (ADMINISTRATION) REGULATIONS.

Regulation 31.

Application for consent to the commencement and carrying out of building works or part of building works or of street works.

28 January 1976

To the Building Authority,

I/We, (name of applicant in block letters) CHARLES H. DUFF apply for your consent to the commencement and carrying out of the following works (here specify the type of work, e.g. building works or street works or, if the application is in respect of part only of building works, specify the part in respect of which the application is made)---

Spread footings (Amendments) at (No. and name of street) 12, Balmington Path & Kotewall Road on (Lot No./Permit Area No.) 16, L. 1. 8171

1. The following plans of the above works have been approved by you---

Table with 3 columns: Plans, Date of notice of approval, B.O.O. Ref. No. Row 1: Spread footings (Amendments), 24 January 1976, 3/2553/69

RECEIVED BY 3. *The certificate, Form 10, required by regulation 17 of the Building (Administration) Regulations, in connexion with the proposed structural use of steel and/or reinforced concrete, was submitted on FEB 9 9 54 AM 1976

4. *The certificate (stability certificates) required by regulation 18 of the Building (Administration) Regulations was submitted on [Signature] 1975

[Signature] Signature of applicant.

* Delete if not applicable.

28 January 1975

Supreme
Court of
Hong Kong

**LETTER FROM BUILDING AUTHORITY
TO C. H. DUFF WITH FORM 12**

No. referred
to in the
agreed
bundle
188

Charles H. Duff, Esq.,
2013 Connaught Centre,
Hong Kong.

Letter from
Building
Authority to
C.H. Duff
with
Form 12
19/3/76

19th March, 1976

Dear Sir,

12 Babington Path & Kotewall Road — I.L. 8171

I refer to your application dated 17th February 1976 for approval of proposals.

It is the usual practice in the Buildings Ordinance Office for all submissions to be checked carefully to ensure that contraventions of the Buildings Ordinance and Regulations are not present and that from other aspects where the public interest is involved, the proposals are viable. However, the pressure of work in the Buildings Ordinance Office is such that this usual practice cannot be followed without most serious delays continuing to affect all submissions to the B.O.O. Therefore, while your application has been checked on the basis of certain elementary checks (and on this basis I am satisfied that your proposals may be approved) the full range of usual checking has not been carried out. 10

The curtailment of the usual range of checks emphasizes your duties and responsibilities as Authorised Person and I must stress the importance the Building Authority attaches to the proper assumption of responsibility by Authorised Person. It is self-evident that any alteration to a building during erection or on completion, costs money and causes delays. Where the Building Authority is of the opinion that an Authorised Person has failed in his duty appropriate action will be taken. 20

Form 12 indicating approval to your proposals, and one set of plans are enclosed herewith. Will you please draw the contents of this letter to the attention of your client?

Yours faithfully,
(Sd.) R. Tsao
pro. Building Authority 30

Supreme Court of Hong Kong

No. referred to in the agreed bundle 188
Letter from Building Authority to C.H. Duff with Form 12 19/3/76 (Contd.)

GOVERNMENT OF HONG KONG.

Form 12.

BUILDINGS ORDINANCE.

(Chapter 123).

Section 14.

BUILDING (ADMINISTRATION) REGULATIONS.

Regulation 30(1)(a).

Approval of Plans.

L.O.O. Ref. No. *4180/76*

To: *Carson Architects (1976) Ltd.*

OFFICE OF THE BUILDING AUTHORITY.

19th March, 1976

Carson Architects (1976) Ltd.

The *Carson Architects (1976) Ltd.*

plans attached hereto, on which I have signified my approval, are hereby approved.

(No. and Name of Street) *1, Victoria Park & Kowloon (Kowloon)*

(Lot No./Permit-Area-No.) *1-171*

Your attention is drawn to subsection (2) of section 14 of the Buildings Ordinance, which provides that the giving by the Building Authority of his approval to any plans shall not exempt any person from the necessity of obtaining the consent of the Building Authority to the commencement and carrying out of the *Carson* works shown on such plans. This approval does NOT authorize the commencement or carrying out of any works.

*Carson Architects (1976) Ltd.,
1, Victoria Park & Kowloon Building,
Kowloon.*

H. C. Ho

H. C. Ho
pro. Building Authority.

Supreme
Court of
Hong Kong

LETTER FROM BUILDING AUTHORITY TO C. H. DUFF

26th March, 1976

No. referred
to in the
agreed
bundle
189
Letter from
Building
Authority to
C.H. Duff
26/3/76

Charles H. Duff, Esq.,
2013 Connaught Centre,
Hong Kong.

Dear Sir,

12 Babington Path & Kotewall Road — I.L. 8171

I refer to your shoring/working procedure plan of underpinning works received on 3rd March, 1976 by this office.

There is generally no structural objection to our proposals as shown. Please ensure that the work must be carried out accordingly and in accordance with the 10
precisions of the Building Ordinance.

One copy of the above mentioned plan is returned to you herewith and the other copy is retained in this office for record and reference purposes.

Your attention is also drawn to Regulation 8 and 10 of the Building (Construction) Regulations 1975.

Yours faithfully,
(Sd.) R. Tsao
pro. Building Authority.

Supreme
Court of
Hong Kong

**COPY LETTER FROM C. H. DUFF
TO BUILDING AUTHORITY**

No. referred
to in the
agreed
bundle
190
Copy letter
from
C.H. Duff
to Building
Authority
29/3/76

The Building Authority,
Public Works Department,
Murray Building,
Garden Road,
Hong Kong.

29th March, 1976.

Attention Mr. H. Wong

Dear Sir,

10

**12 Babington Path & Kotewall Road
I.L. 8171**

With reference to my conversation with Mr. H. Wong, Executive Officer, to-day, I write to confirm that the Form 14 for the above project has been lost and to request you to issue me with a certified copy for future use.

Yours faithfully,
Charles H. Duff

Supreme
Court of
Hong Kong

**COPY LETTER FROM BUILDING AUTHORITY
TO C. H. DUFF**

No. referred
to in the
agreed
bundle
191
Letter from
Building
Authority to
C.H. Duff
30/3/76

30th March, 1976.

Charles H. Duff Esq.,
2013 Connaught Centre,
Hong Kong.

Dear Sir,

12 Babington Path & Kotewall Road — I.L. 8171

Please find enclosed Form 14 dated 30th March 1976 giving consent to commence foundation under-pinning works at the above site. 10

This consent is however conditional upon your proposed precautionary procedures the plan of which was received by this office on 3rd March 1976 being satisfactorily carried out, item 7 of Section 7(1), Buildings Ordinance refers. If these conditional precautionary procedures are to be materially altered written agreement must first be obtained from this office, failing which a Cease Works Order may be served under Section 23 and/or prosecution action taken under Section 40(2B) of the Building Ordinance.

Yours faithfully,
(Sd.) P. H. Hayward
pro. Building Authority. 20

Supreme
Court of
Hong Kong

**COPY LETTER FROM C. H. DUFF
TO BUILDING AUTHORITY**

No. referred
to in the
agreed
bundle
192
Copy letter
from
C.H. Duff
to Building
Authority
30/3/76

The Building Authority,
Public Works Department,
Murray Building,
Garden Road,
Hong Kong.

30th March, 1976.

Attention: Mr. H. Wong

Dear Sir,

**12 Babington Path & Kotewall Road
I.L. 8171**

10

Further to my telephone conversation with Mr. H. Wong yesterday, I now confirm that the original form 14 for the above project has been found and is enclosed herewith.

Please disregard my letter of yesterday's date and return the photocopy of form 14 to me in due course.

Thank you for your assistance.

Yours faithfully,
Charles H. Duff

20

Supreme
Court of
Hong Kong

**COPY LETTER FROM C. H. DUFF
TO BUILDING AUTHORITY**

No. referred
to in the
agreed
bundle
193
Copy letter
from
C.H. Duff
to Building
Authority
13/4/76

13th April, 1976.

The Building Authority,
Public Works Department,
Murray Building,
Hong Kong.

Dear Sirs,

Re.: 12 Babington Path & Kotewall Road, I.L. 8171

I submit herewith drawing No. RE-78-12 showing those footings of Block "B" (Lower Block) which were cast on 1971 and which I suspect may have suffered some dislocation due to the land slip in June 1972. 10

To be on the safe side, I wish to demolish these footings and to cast new but exactly similar ones in their place, conforming with the plans originally approved on 21/10/71.

Drawing No. RE-78-21 which shows the proposed temporary site formation and working procedure, has been amended to include the additional information requested by your office. For your ready reference I also send, as requested by you, two copies of the originally approved foundation plan (Drawing No. E 78) upon which I have shown the work, now proposed, in relation to the rest of the foundation work already in hand. 20

The enclosed form 15 conveys my application for renewal of your consent to resume work on those spread footings, the plans for which were approved on 21/10/71.

Referring to my letter of 16th January 1976 and to your reply thereto of 14th February 1976, the terms of which have since been complied with, I now request that you will please renew your consent to commence the work on the superstructure of the lower block in accordance with the plans approved on 21/10/71.

Application for this renewal of consent is contained in the form 15 referred to above. The form 14 is enclosed for your endorsement please.

Yours faithfully,
(Sd.) Charles H. Duff

30

Supreme
Court of
Hong Kong

LETTER FROM BUILDING AUTHORITY TO C. H. DUFF

11th May, 1976.

No. referred
to in the
agreed
bundle
194
Letter from
Building
Authority to
C.H. Duff
11/5/76

Charles H. Duff, Esq.,
2013 Connaught Centre,
Hong Kong.

Dear Sir,

12 Babington Path & Kotewall Road — I.L. 8171

I refer to your Form 15 applying for renewal of consent for spread footing works of Block B (Lower Block), the consent is renewed on the Form 14 attached.

2. Please be advised that your proposed working procedure as shown on plans submitted on 13th April, 1976 must be strictly followed and additional precautionary measures be provided when found necessary. 10
3. When the footings already formed have been demolished, please inform this office so that an inspection from this office may be made before such footings are to be re-cast.
4. Please submit a fresh Form 15 for superstructure of Block B after you have carried out the spread footing work to both your and this office's satisfaction.
5. One set of the above mentioned working procedure plans is returned to you herewith, the other set is retained in this office for record and reference purposes.

Yours faithfully,
(Sd.) F. P. Lee
pro. Building Authority.

20

Supreme
Court of
Hong Kong

**COPY LETTER FROM CROWN LANDS & SURVEY OFFICE
TO DEFENDANT**

No. referred
to in the
agreed
bundle
195
Letter from
Crown
Lands &
Survey
Office to
Defendant
7/6/76

Messrs. Chinachem Group,
9th Floor Baskerville House,
22 Ice House Street,
Hong Kong.

Gentlemen,

7th June, 1976.

I.L. 8171 — 12 Babington Path

I refer to previous correspondence concerning the right-of-way to the above 10
lot and confirm that you may proceed with the construction of the access plans for
which have been approved by the Building Authority. It is not intended that a
separate Deed of right-of-way be entered into as it would only contain the conditions
stated in Special Condition 20 of the Conditions of Exchange.

Yours faithfully,
(Sd.) R. E. Thompson
for Chief Estate Surveyor

Supreme
Court of
Hong Kong

**COPY LETTER FROM K. K. WONG
TO BUILDING AUTHORITY**

July 13, 1976.

No. referred
to in the
agreed
bundle
197
Copy letter
from K.K.
Wong to
Building
Authority
13/7/76

The Building Authority,
Public Works Department,
Murray Building,
Garden Road,
Hong Kong.

Dear Sir,

12 Babington Path, I.L. 8171, Hong Kong

10

I would like to submit to you, instead of Mr. Charles H. Duff during his temporary absence from Hong Kong, for your kind approval herewith 2 sets of plans of drawing nos. 1/3, 2/3 and 3/3 in respect of the proposed removal of the existing "filling".

Such "filling" is actually the remaining debris from the 1972 landslip. In early 1973, permission was given to remove all the debris, but removal of this part upon which government had built a temporary access road, was deferred in order to keep the access road temporarily available for use.

Some of the spread footings for the Lower Block (Block B) parking area are located in this area and it is now necessary to remove the over-burden before they can be constructed. 20

Implementation of the working procedure shown on the said plans will also improve the drainage which is presently inadequate in this area.

The relevant Form 38 had already been submitted to you on 23rd June, 1976. The plans submitted were signed by Mr. Charles H. Duff and endorsed by me for minor revision on his behalf.

Yours faithfully,
(Sd.) K. K. Wong

Supreme
Court of
Hong Kong

**COPY LETTER FROM CROWN LANDS & SURVEY OFFICE
TO F. Y. KAN & PARTNERS**

No. referred
to in the
agreed
bundle
198
Copy letter
from Crown
Lands &
Survey
Office to
F.Y. Kan
& Partners
20/7/76

20th July 1976

Messrs. F. Y. Kan & Partners,
Room 1002 Baskerville House,
13 Duddell Street,
Hong Kong.

Dear Sirs,

I.L. 8171 — Babington Path

I refer to your letter of 6th July 1976 in respect of the above subjects.

Your application to reduce the number of car parking spaces is receiving 10
attention and I shall let you have a more detailed reply in due course.

Yours faithfully,
(Sd.) A. Watson
for Chief Estate Surveyor
(Property Management/Modification Div.)

Supreme
Court of
Hong Kong

**LETTER FROM BUILDING AUTHORITY
TO C. H. DUFF**

No. referred
to in the
agreed
bundle
199
Letter from
Building
Authority to
C.H. Duff
9/8/76

Charles Duff, Esq.,
2013 Connaught Centre,
Hong Kong.

Dear Sir,

9th August 1976

12 Babington Path & Kotewall Road — I.L. 8171

I refer to your application dated 13th July 1976 for approval of proposals.

It is the usual practice in the Buildings Ordinance Office for all submissions to be checked carefully to ensure that contraventions of the Buildings Ordinance and Regulations are not present and that from other aspects where the public interest is involved, the proposals are viable. However, the pressure of work in the Buildings Ordinance Office is such that this usual practice cannot be followed without most serious delay continuing to affect all submissions to the B.O.O. Therefore, your application has been checked on the basis of certain elementary checks only but this elementary checking has disclosed that

Please see overleaf.

and your proposal therefore is disapproved.

This curtailment of the usual range of checks emphasizes your duties and responsibilities as Authorised Person and I must stress the importance the Building Authority attaches to the proper assumption of responsibility by Authorised Persons. It is self-evident that any alteration to a building during erection or on completion, costs money and causes delays. Where the Building Authority is of the opinion that an Authorised Person has failed in his duty appropriate action will be taken.

Please ensure, therefore, that a re-submission complies fully with the Buildings Ordinance and Regulations, and that all relevant information is attached.

Yours faithfully,
(Sd.) R. Lok
pro. Building Authority 30

Supreme
Court of
Hong Kong

No. referred
to in the
agreed
bundle
199

Letter from
Building
Authority to
C.H. Duff
9/8/76
(Contd.)

The drainage connections are found to be unsatisfactory — Section 28 (1) of the Buildings Ordinance. In this connection, your attention is drawn to the comments made by the Chief Engineer Highways (illegible word) as follows:—

- a) The proposed drainage connection to public channel/stream is not acceptable in that the details of the sand trap should be given.
- b) The connections from the sand trap to the existing nullah should in the future be carried out by the Government at your client's cost.

Supreme
Court of
Hong Kong

**COPY LETTER FROM K. K. WONG
TO BUILDING AUTHORITY**

August 14, 1976.

No. referred
to in the
agreed
bundle
200
Copy letter
from K.K.
Wong to
Building
Authority
14/8/76

The Building Authority,
Public Works Dept.,
Murray Bldg.,
Garden Road,
Hong Kong.

Dear Sir,

12 Babington Path, I.L. 8171, Hong Kong

10

I refer to your letter dated 9th August, 1976 addressed to Mr. Charles Duff pertaining to drawings submitted in respect of the proposed removal of the existing filling.

I would like to re-submit to you, instead of Mr. Charles Duff during his temporary absence from Hong Kong, for your kind approval herewith two sets of revised drawings of nos. 1/3, 2/3 and 3/3 on which your comments as stated in your said letter had been duly incorporated.

Yours faithfully,

(Sd.) K. K. Wong

Supreme
Court of
Hong Kong

**COPY LETTER FROM C. H. DUFF
TO BUILDING AUTHORITY**

No. referred
to in the
agreed
bundle
201
Copy letter
from
C.H. Duff
to Building
Authority
31/8/76

The Building Authority,
Public Works Department,
Murray Building,
Garden Road,
Hong Kong.

Your Ref.: B.O.O. 2253/69

31st August, 1976.

Dear Sir,

10

Babington Path — Kotewall Road, I.L. 8171

With reference to the Form 38 I sent you in June 1976, please note that I have now returned to the Colony.

Yours faithfully,
Charles H. Duff

Supreme
Court of
Hong Kong

**COPY LETTER FROM C. H. DUFF
TO BUILDING AUTHORITY WITH FORM 21**

No. referred
to in the
agreed
bundle
203
Copy letter
from
C.H. Duff
to Building
Authority
with
Form 21
6/9/76

Your File Ref.: B.O.O. 3/2253/69

The Building Authority,
Public Works Department,
Murray Building,
Garden Road,
Hong Kong.

6th September, 1976.

Dear Sir,

10

12 Babington Path & Kotewall Road, I.L. 8171

The caisson work at the above site has now been completed and accordingly I submit herewith the following:—

1. Form 21 duly completed,
2. Contractor's caisson report (2 copies),
3. Record plan showing final levels of bottoms of caissons,
4. Report on S.P.T. tests for caissons.

Please advise as to what bore drilling tests you require in which connection please note that none of the load bearing caissons carry more than a nominal load.

Yours faithfully,
(Sd.) Charles H. Duff

20

Supreme Court of Hong Kong

GOVERNMENT OF HONG KONG

Form 2L

BUILDING (ADMINISTRATION) REGULATIONS.

Regulations 25 & 26.

Certificate on completion of building works not resulting in a new building or of street works

No. referred to in the agreed bundle 203 Copy letter from C.H. Duff to Building Authority with Form 21 6/9/76 (Contd.)

September 6, 1976

To the Building Authority,

In accordance with the provisions of Regulation 25/26 of the Building (Administration) Regulations, I/we Chi Fung Co., Ltd., registered contractor, of (address) 9th Floor, Baskerville House, No. 22 Ice House St., H.K., certify that the Caissons works (here state whether building works or street works) carried out at (No. and Name of Street) 12 Babington Path & Kotewall Road, in Lot No./Permit Area No.) I.L. 8171, to the carrying out of which you gave your consent on November 21, 1975, Permit No. BA 606/71 B.O.O. Ref. No. 2253/69 have been carried out in accordance with the provisions of the Buildings Ordinance and regulations made thereunder.

No. of registration certificate 1395

CHI FUNG COMPANY LIMITED

Signature of registered contractor.

September 6, 1976

In accordance with the provisions of regulation 25 of the Building (Administration) Regulations, I C. H. Duff registered structural engineer, of 2013, Connaught Centre (Address)

certify that the structural elements of the above building have been erected in accordance with the plans approved by you and are, in my opinion, structurally safe (B.O.O. Ref. No. 2253/69).

Signature of registered structural engineer.

In accordance with the provisions of Regulation 25/26 of the Building (Administration) Regulations, C. H. Duff authorized person, of (address) 2013, Connaught Centre certify that the above Caissons works have been carried out in accordance with the plans approved by you and are, in my opinion, structurally safe. (B.O.O. Ref. No. 2253/69)

Total cost of the building works \$500,000.00

Signature of authorized person.

September 6, 1976

Supreme
Court of
Hong Kong

**COPY LETTER FROM C. H. DUFF
TO BUILDING AUTHORITY**

No. referred
to in the
agreed
bundle
204
Copy letter
from
C.H. Duff
to Building
Authority
7/9/76

The Building Authority,
Public Works Department,
Murray Building,
Garden Road,
Hong Kong.

Dear Sir,

7th September, 1976.

12, Babington Path — Kotewall Road, I.L. 8171

10

I submit herewith amended details of the triangular foundation F1 of the upper block (Block A). No calculations are necessary because no structural alteration is involved; — it is purely a change of arrangement. The changes are as follows:—

1) The bottom level of a short section of the foundation beam under wall W2 has been raised by 3 feet at its eastern end. This part of the foundation extends into the hill slope where the ground is much firmer than it is toward its western end and is thus easily capable of sustaining the same loading pressure at the higher level. The proposed raising of the level also simplifies the working procedure by reducing the depth of excavation required at this critical point during construction.

2) The slopes of the foundations under walls W1 and W3 are presently 45° which I consider too steep. The amendment substantially reduces the angles of these slopes and provides for a stepped series of horizontal bearing areas which is an improvement. 20

I am proceeding with the final design of the working procedure for the foundation of the upper level (Block A) based on the details now submitted and I shall therefore greatly appreciate your early advice regarding approval.

The construction of this part of the foundation, as pointed out in previous correspondence and in Consultants' reports, should be carried out in the dry season and I trust you will assist me in making an early start.

Yours faithfully,
(Sd.) Charles H. Duff

30

Supreme
Court of
Hong Kong

**LETTER FROM BUILDING AUTHORITY
TO C. H. DUFF WITH FORM 12**

No. referred
to in the
agreed
bundle
205
Letter from
Building
Authority to
C.H. Duff
with
Form 12
15/9/76

Charles Duff, Esq.,
2013 Connaught Centre,
Hong Kong.

15th September 1976

Dear Sir,

12 Babington Path & Kotewall Road — I.L. 8171

I refer to your application dated 14th August 1976 for approval of proposals.

It is the usual practice in the Buildings Ordinance Office for all submissions to be checked carefully to ensure that contraventions of the Buildings Ordinance and Regulations are not present and that from other aspects where the public interest is involved, the proposals are viable. However, the pressure of work in the Buildings Ordinance Office is such that this usual practice cannot be followed without most serious delays continuing to affect all submissions to the B.O.O. Therefore, while your application has been checked on the basis of certain elementary checks (and on this basis I am satisfied that your proposals may be approved) the full range of usual checking has not been carried out. 10

The curtailment of the usual range of checks emphasizes your duties and responsibilities as Authorised Person and I must stress the importance the Building Authority attaches to the proper assumption of responsibility by Authorised Persons. It is self-evident that any alteration to a building during erection or on completion, costs money and causes delays. Where the Building Authority is of the opinion that an Authorised Person has failed in his duty appropriate action will be given. 20

Form 12 indicating approval to your proposals, and one set of plans are enclosed herewith. Will you please draw the contents of this letter to the attention of your client?

Yours faithfully,
(Sd.) J. Hsi
pro. Building Authority. 30

Supreme Court of Hong Kong

No. referred to in the agreed bundle 205
Letter from Building Authority to C.H. Duff with Form 12 15/9/76 (Contd.)

GOVERNMENT OF HONG KONG.

Form 12.

BUILDINGS ORDINANCE.

(Chapter 123).

Section 14.

BUILDING (ADMINISTRATION) REGULATIONS.

Regulation 30(1)(a).

Approval of Plans.

E.O.O. Ref. No. 1/2253/69
To: Charles Duff, Esq.,
2013 Connaught Centre,
Hong Kong.

OFFICE OF THE BUILDING AUTHORITY.

15th September 1976.

The site formation

plans attached hereto, on which I have signified my approval, are hereby approved.

(No. and Name of Street) 12 Babington path & Katerwall Road
on (Lot No./Permit Area No.) 1.L. 8171

2. Your attention is drawn to subsection (2) of section 14 of the Buildings Ordinance, which provides that the giving by the Building Authority of his approval to any plans shall not exempt any person from the necessity of obtaining the consent of the Building Authority to the commencement and carrying out of the site formation works shown on such plans. This approval does NOT authorize the commencement or carrying out of any site formation works.

pro. Building Authority.

Supreme
Court of
Hong Kong

**LETTER FROM PUBLIC WORKS DEPARTMENT
TO BERNARD WONG & CO.**

No. referred
to in the
agreed
bundle
226
Letter Public
Works
Department
to Bernard
Wong & Co.
30/9/76

Bernard Wong & Co.,
Room 1101 Takshing House,
20 Des Voeux Road Central,
Hong Kong.

Dear Sir,

Hong Kong, 30th September, 1976

Babington Path — I.L. 8171

I refer to your letter of 13th September 1976 and have the following answers 10
to your questions:—

- 1) & 2) The suspension of work at the time of the June, 1972 rainstorm resulted in the consent to commencement of work already granted to be revoked, as stipulated in Section 20 of the Buildings Ordinance, since the period of the suspension was over 3 months. By virtue of the same Section, work cannot be resumed until an application has been made for renewal of such consent. In this particular case, the authorised person for this project was advised that it would be necessary, before consent might be renewed, to submit detailed proposals for safeguarding the stability of the adjoining land, particularly the hillslope below Kotewall Road, on which an access road would be constructed. 20
- 3) In response to the above, plans have been submitted to and subsequently approved by this office. Applications to certain work to be resumed or carried out have been granted on 21st November 1975 for the commencement of the caissons and caisson retaining wall for the access road and another consent renewed on 11th May 1976 for part of the spread footing work for the main building to be carried out.
- 4) Prior to suspension, consent in the prescribed form had been granted for the spread footing, building, drainage and structural works for the main building and the ramp structure and part retaining walls for the access road 30
to be carried out.

Yours faithfully,
(Sd.) P. H. Hayward
pro. Building Authority.

Supreme
Court of
Hong Kong

**COPY LETTER FROM C. H. DUFF
TO BUILDING AUTHORITY**

No. referred
to in the
agreed
bundle
209
Copy letter
from
C.H. Duff
to Building
Authority
11/10/76

The Building Authority,
Public Works Department,
Murray Building,
Garden Road,
Hong Kong.

11th October, 1976

Dear Sir,

12 Babington Path — Kotewall Road, I.L. 8171

10

Reference your letter of 11th May, 1976, the new footings for stage I were cast some time ago and the prepared ground surface for stage 2 footings had already been inspected and approved by your office. I now repeat my request for your renewal of consent for the superstructure of the lower block.

I also request you to renew your consent for construction of the spread footings for the access road structure. These are all situated in the lower part of the site (which is not steep) and present no stability problem. The overburden above these footings has now been removed (under site formation plan approved 15-9-76) so that only very shallow individual excavations will be required. I am anxious to complete these footings and form this part of the site to the final finished level as soon as possible. 20

I enclose form 15 covering the above requests for renewal of consent together with form 14 for your endorsement please.

Yours faithfully,
Charles H. Duff

Supreme
Court of
Hong Kong

**LETTER FROM BUILDING AUTHORITY
TO C. H. DUFF**

No. referred
to in the
agreed
bundle
210
Letter from
Building
Authority to
C.H. Duff
11/10/76

Charles H. Duff, Esq.,
2013 Connaught Centre,
Hong Kong.

Dear Sir,

11th October 1976

12 Babington Path & Kotewall Road — I.L. 8171

I acknowledge and thank you for your letter dated 6th September 1976 and the attached Form 21 ((illegible) resubmitted on 20th September 1976), contractor's caisson report, caisson record plan and S.P.T. test for caissons. 10

2. I shall be grateful if you will prepare cores on caissons No. CA20A, CA30 and CA37 on site for ((illegible)) by this office. The coring is to be at a ((illegible)) point along a diameter and be carried down to the soil upon which the caisson is founded.

Yours faithfully,
(Sd.) F. P. Lee
pro. Building Authority

Supreme
Court of
Hong Kong

**LETTER FROM BUILDING AUTHORITY
TO C. H. DUFF WITH FORM 12**

No. referred
to in the
agreed
bundle
211
Letter from
Building
Authority to
C.H. Duff
with
Form 12
12/10/76

BOO 3/2253/69

Charles H. Duff, Esq.,
2013 Connaught Centre,
Hong Kong.

12th October 1976

Dear Sir,

12 Babington Path & Kotewall Road — I.L. 8171

I refer to your application dated 7th September 1976 for approval of proposals. 10
(spread footing amendments)

It is the usual practice in the Buildings Ordinance Office for all submissions to be checked carefully to ensure that contraventions of the Buildings Ordinance and Regulations are not present and that from other aspects where the public interest is involved, the proposals are viable. However, the pressure of work in the Buildings Ordinance Office is such that this usual practice cannot be followed without most serious delays continuing to affect all submissions to the B.O.O. Therefore, while your application has been checked on the basis of certain elementary checks (and on this basis I am satisfied that your proposals may be approved) the full range of usual checking has not been carried out. 20

The curtailment of the usual range of checks emphasizes your duties and responsibilities as Authorized Person and I must stress the importance the Building Authority attaches to the proper assumption of responsibility by Authorized Persons. It is self-evident that any alteration to a building during erection or on completion, costs money and causes delays. Where the Building Authority is of the opinion that any Authorized Person has failed in his duty appropriate action will be given.

Form 12 indication approval to your proposals, and one set of plans are enclosed herewith. Will you please draw the contents of this letter to the attention of your client?

Yours faithfully,
(Sd.) F. P. Lee 30
pro. Building Authority

Supreme Court of Hong Kong

No. referred to in the agreed bundle 211
Letter from Building Authority to C.H. Duff with Form 12 12/10/76 (Contd.)

GOVERNMENT OF HONG KONG.

Form 12.

BUILDINGS ORDINANCE

(Chapter 123).

Section 14.

BUILDING (ADMINISTRATION) REGULATIONS.

Regulation 30(1)(a).

Approval of Plans.

B.O.O. Ref. No. 3/2253/69
To: Mr. Charles H. Duff,
2013, Connaught Centre,
Hong Kong.

OFFICE OF THE BUILDING AUTHORITY.
12th October 1976.

The spread footing (amendments)

plans attached hereto, on which I have signified my approval are hereby approved.

(No. and Name of Street) 12, Babington Path & Kotewall Road
on (Lot No./Permit Area No) 1.L.8171

2. Your attention is drawn to subsection (2) of section 14 of the Buildings Ordinance, which provides that the giving by the Building Authority of his approval to any plans shall not exempt any person from the necessity of obtaining the consent of the Building Authority to the commencement and carrying out of the spread footing works shown on such plans. This approval does NOT authorize the commencement or carrying out of any spread footing works.

R. L. ...

pro. Building Authority.

Supreme
Court of
Hong Kong

**LETTER FROM PUBLIC WORKS DEPARTMENT
TO BERNARD WONG & CO.**

19th October 1976

No. referred
to in the
agreed
bundle
227

Letter Public
Works
Department
to Bernard
Wong & Co.
19/10/76

Bernard Wong & Co.,
1101 Takshing House,
20 Des Voeux Road C.,
Hong Kong.

Dear Sir,

Babington Path — I.L. 8171

I refer to your letter of 4th October 1976.

10

2. Comprehensive site investigations had been carried out soon after the suspension of work in 1972 and the results of the investigation, together with recommendations for safeguarding the stability of the adjoining land were submitted to this office on 8th May 1975 and 19th June 1975. The detailed proposals, incorporating the above recommendations, for actual work to be carried out were not submitted until 10th July 1975.

Yours faithfully,
(Sd.) P. H. Hayward
pro. Building Authority

Supreme
Court of
Hong Kong

**COPY LETTER FROM C. H. DUFF
TO BUILDING AUTHORITY**

No. referred
to in the
agreed
bundle
215
Copy letter
from
C.H. Duff
to Building
Authority
29/10/76

29th October, 1976

The Building Authority
Public Works Department
Murray Building
Garden Road
Hong Kong

Dear Sir,

12 Babington Path & Kotewall Road, I.L. 8171

10

I submit herewith site formation plans (Stage I) for the construction of the foundations of Block "A" (Upper Block) of the above development.

Stage I prepares the site for the construction of most of the spread footings for this block, leaving a small but more critical part to be completed later after carrying out further site formation (Stage II).

Meanwhile I wish to proceed with site formation Stage I and the construction of the spread footings thus provided for.

Plans for Stage II of the site formation will be submitted later.

Yours faithfully,
(Sd.) C. H. Duff

20

Supreme
Court of
Hong Kong

**COPY LETTER FROM BUILDING AUTHORITY
TO C. H. DUFF**

No. referred
to in the
agreed
bundle
218
Copy letter
from
Building
Authority to
C.H. Duff
15/11/76

Charles H. Duff, Esq.,
2013 Connaught Centre,
Hong Kong.

15th November 1976

Dear Sir,

12 Babington Path & Kotewall Road — I.L. 8171

I refer to your application dated 5th October 1976 and received by this office on 11-10-76 for approval of proposals. (Caisson amendments)

10

It is the usual practice in the Buildings Ordinance Office for all submissions to be checked carefully to ensure that contraventions of the Buildings Ordinance and Regulations are not present and that from other aspects where the public interest is involved, the proposals are viable. However, the pressure of work in the Buildings Ordinance Office is such that this usual practice cannot be followed without most serious delay continuing to affect all submissions to the B.O.O. Therefore, your application has been checked on the basis of certain elementary checks only but this elementary checking has disclosed that

(Please see overleaf.)

and your proposal therefore is disapproved.

20

This curtailment of the usual range of checks emphasizes your duties and responsibilities as Authorised Person and I must stress the importance the Building Authority attaches to the proper assumption of responsibility by Authorised Persons. It is self-evident that any alteration to a building during erection or on completion, costs money and causes delays. Where the Building Authority is of the opinion that an Authorised Person has failed in his duty appropriate action will be taken.

Please ensure, therefore, that a re-submission complies fully with the Buildings Ordinance and Regulations, and that all relevant information is attached.

Yours faithfully,
(Sd.) F. P. Lee
pro. Building Authority.

30

Supreme
Court of
Hong Kong

**COPY LETTER FROM C. H. DUFF
TO BUILDING AUTHORITY WITH FORM 14**

No. referred
to in the
agreed
bundle
219
Copy letter
from
C.H. Duff
to Building
Authority
with
Form 14
17/11/76

The Building Authority
Public Works Department
Murray Building
Garden Road
Hong Kong

17th November, 1976

Dear Sir,

12 Babington Path & Kotewall Road, I.L. 8171

I thank you for your Form 14 with a number of renewed consents granted on 10th November, 1976, I now return the same Form 14 for further endorsement to include caisson caps for which the Form 13 is already in your possession. 10

Thank you for your kind attention to this matter.

Yours faithfully,
C. H. Duff

Supreme Court of Hong Kong

No. referred to in the agreed bundle 219
Copy letter from C.H. Duff to Building Authority with Form 14 17/11/76 (Contd.)

GOVERNMENT OF HONG KONG.

Form 14.

BUILDINGS ORDINANCE.

(Chapter 123).

Section 14.

BUILDING (ADMINISTRATION) REGULATIONS.

Regulation 32.

Consent to the commencement and carrying out of building works or part of any building works or of street works.

Permit No. BA 606/71....

B.O.O. Ref. No. 2253/69.....

To: Chinachem Investment Co., Ltd.,
c/o Mr. C. H. Duff,
.....2013, Connaught Centre,
Hong Kong.

OFFICE OF THE BUILDING AUTHORITY.
.....17th November....., 1971.

I hereby consent to the commencement and carrying out of the following works—

Building works

at (No. and Name of Street) 12, Burlington Park & Kowloon Road

on (Lot No./Permit Area No.) T.L. 8171.....

2. The above building works are to be carried out in accordance with the following plans, which have been approved by me and which have been returned to Mr. IAN CHENG, authorized architect, and in compliance with the Buildings Ordinance and the regulations made thereunder, and in accordance with Permit No. issued under Section 42 of the Buildings Ordinance.

B.O.O. Reference	Plans	Date of Notice of Approval	Consent Date	Signature	Consent Renewed	Signature	
3/2253/69	CAISSON CAPS	13-11-75	25-11-75	[Signature]			
LOWER BLOCK	3/2253/69	SPREAD FOOTING (FOR MAIN BUILDING)	21-10-71	17-11-71	Sd. H.J. Powell	11-5-76	Sd. E. Lok
	2/2253/69	BUILDING	8-9-70				Sd. IAN CHENG (W. D. CHENG)
	2/2253/69	BUILDING (AMENDMENTS)	9-10-71	7-1-72	Sd. H. J. Powell		
	3/2253/69	STRUCTURAL (FOR MAIN BUILDING)	21-10-71			10-11-76	
	4/2253/69	DRAINAGE	10-2-72	2-6-72	Sd. D.H. Parsons		
3/2253/69	RAMP STRUCTURE & PART RETAINING WALLS FOR ACCESS ROAD	25-2-72	3-3-72	Sd. H.J. Powell			

3. Your attention is drawn to the provisions of Section 14(2) of the Buildings Ordinance, and before commencing the above building works you should ascertain that they will not contravene the provisions of any enactment or the requirements of any authority or the terms or conditions of any Crown lease, licence or permit.

Sd. H. J. Powell
pro. Building Authority.

Supreme Court of Hong Kong

No. referred to in the agreed bundle 219
Copy letter from C.H. Duff to Building Authority with Form 14 17/11/76 (Contd.)

GOVERNMENT OF HONG KONG.

Form 14.

BUILDINGS ORDINANCE.

(Chapter 123).

Section 14.

BUILDING (ADMINISTRATION) REGULATIONS.

Regulation 32.

Consent to the commencement and carrying out of building works or part of any building works or of street works.

Permit No. BA. 606/71.....

B.O.O. Ref. No. 2253/69.....

To: Chinachem Investment Co., Ltd.,
c/o Mr. C. H. Duff,
.....2013, Connaught Centre,
Hong Kong.

OFFICE OF THE BUILDING AUTHORITY.
.....17th November....., 1971.

I hereby consent to the commencement and carrying out of the following works—

Building works

at (No. and Name of Street) 12, Burlington Path & Kowloon Road

on (Lot No./Permit Area No.) 1, 1, 8171,.....

2. The abovebuilding..... works are to be carried out in accordance with the following plans, which have been approved by me and which have been returned to Mr. Ian Chung To....., authorized architect, and in compliance with the Buildings Ordinance and the regulations made thereunder, and in accordance with Permit No. issued under Section 42 of the Buildings Ordinance.

B.O.O. Reference	Plans	Date of Notice of Approval	Consent Date	Signature	Consent Renewed	Signature
3/2253/69	CAISSON CAPS	13-11-75	25-11-75			
2/2253/69	BUILDING	8-9-70				
2/2253/69	BUILDING (AMENDMENTS)	9-10-71		sd.		
3/2253/69	STRUCTURAL (FOR MAIN BUILDING)	21-10-71	7-1-72	H. J. Fowell	10-2-77	sd.
4/2253/69	DRAINAGE	10-2-72	2-6-72	sd. D. H. Parsons		
3/2253/69	CAISSON RETAINING WALL & CAISSON	13-11-75	21-11-75	sd. P. H. Hayward		
3/2253/69	SPREAD FOOTING (AMENDMENTS)	21-1-76	30-3-76	sd. P. H. Hayward		
	FOR LOWER BLOCK UNDERPINNING					

UPPER BLOCK

3. Your attention is drawn to the provisions of Section 14(2) of the Buildings Ordinance, and before commencing the abovebuilding..... works you should ascertain that they will not contravene the provisions of any enactment or the requirements of any authority or the terms or conditions of any Crown lease, licence or permit.

..... Si. H. J. Fowell.....
pro. Building Authority.

Supreme
Court of
Hong Kong

**COPY LETTER FROM BUILDING AUTHORITY
TO C. H. DUFF WITH FORM 12**

No. referred
to in the
agreed
bundle
220
Letter from
Building
Authority to
C.H. Duff
with
Form 12
29/11/76

Charles Duff, Esq.,
2013 Connaught Centre,
Hong Kong.

29th November, 1976

Dear Sir,

12 Babington Path & Kotewall Road — I.L. 8171

I refer to your application dated 29th October 1976 for approval of proposals.

It is the usual practice in the Buildings Ordinance Office for all submissions to be checked carefully to ensure that contraventions of the Buildings Ordinance and Regulations are not present and that from other aspects where the public interest is involved, the proposals are viable. However, the pressure of work in the Buildings Ordinance Office is such that this usual practice cannot be followed without most serious delays continuing to affect all submissions to the B.O.O. Therefore, while your application has been checked on the basis of certain elementary checks (and on this basis I am satisfied that your proposals may be approved) the full range of usual checking has not been carried out. 10

The curtailment of the usual range of checks emphasizes your duties and responsibilities as Authorised Person and I must stress the importance the Building Authority attaches to the proper assumption of responsibility by Authorised Persons. It is self-evident that any alteration to a building during erection or on completion, costs money and causes delays. Where the Building Authority is of the opinion that an Authorised Person has failed in his duty appropriate action will be given. 20

Form 12 indicating approval to your proposals, and one set of plans are enclosed herewith. Will you please draw the contents of this letter to the attention of your client?

Yours faithfully,
(Sd.) C. H. Riley
pro. Building Authority. 30

Supreme
Court of
Hong Kong

No. referred
to in the
agreed
bundle
220
Letter from
Building
Authority to
C.H. Duff
with
Form 12
29/11/76
(Contd.)

GOVERNMENT OF HONG KONG.

Form 12

BUILDINGS ORDINANCE

(Chapter 123)

Section 14

BUILDING (ADMINISTRATION) REGULATIONS.

Regulation 36(1)(a).

Approval of Plans.

B.O.O. Ref. No.

1/2253/69

To:

Charles Duff Esq.,
2013 Connaught Centre,
Hong Kong.

OFFICE OF THE BUILDING AUTHORITY.

29th November 1976.

The

site formation (apartments)
(Stage I)

plans attached hereto, on which I have signified my approval, are hereby approved.

(No. and Name of Street)

12 Babington Park & Kowloon Road

on (Lot No./Permit Area No.)

12 81701

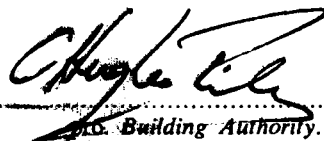
2. Your attention is drawn to subsection (2) of section 14 of the Buildings Ordinance, which provides that the giving by the Building Authority of his approval to any plans shall not exempt any person from the necessity of obtaining the consent of the Building Authority to the commencement and carrying out of the

site formation

works shown on such plans. This approval does NOT authorize the commencement or carrying out of any

site formation

works.


C.H. Duff
Building Authority.

Supreme
Court of
Hong Kong

**COPY LETTER FROM C. H. DUFF
TO BUILDING AUTHORITY WITH FORMS 15 AND 13**

No. referred
to in the
agreed
bundle
222

Your Ref: B.O.O. 2253/69

4th December, 1976

Letter from
C.H. Duff
to Building
Authority
with
Form 13 and
Form 15
4/12/76

The Building Authority,
Public Works Department,
Murray Building,
Garden Road,
Hong Kong.

Dear Sirs,

10

12 Babington Path, I.L. 8171

I submit herewith Form 15 for the renewal of consent for the Spread Footing work for Stage I of the Upper Block and Form 13 for Site Formation Consent, together with the necessary Form 14.

The plan for the Spread Footing is attached with the required Stage I coloured in blue and the Stage II coloured in red, for which shoring proposals and calculation will be submitted later.

Your kind attention to this matter will be greatly appreciated.

Yours faithfully,
C. H. Duff

20

Supreme
Court of
Hong Kong

No. referred
to in the
agreed
bundle
222

Letter from
C.H. Duff
to Building
Authority
with
Form 13 and
Form 15
4/12/76
(Contd.)

GOVERNMENT OF HONG KONG

Form 15.

BUILDINGS ORDINANCE

(Chapter 123).

Section 20.

Application for renewal of consent to the carrying out
of building works or street works.

4th December....., 1976

To the Building Authority,

In accordance with the provisions of Section 20 of the Buildings Ordinance, I/we (name of applicant in block letters) C. H. Duff

hereby apply for the renewal of your consent dated 17th November, 1971

Permit No. BA 606/71..... B.O.O. Ref. No. 2253/69

to the carrying out of the Spread Footing works for Stage I, Upper Block

works therein specified relating to—

(a) number and name of street and locality 12 Dabington Path & Kotewall Road

(b) lot number with details of any section or subsection of the lot I.L. 8171

I attach hereto Permit No. BA 606/71.....


.....
Signature of applicant.

GOVERNMENT OF HONG KONG.

Form 13

BUILDINGS ORDINANCE.

(Chapter 123).

Section 14.

BUILDING (ADMINISTRATION) REGULATIONS.

Regulation 31.

Application for consent to the commencement and carrying out of building works or part of building works or of street works.

No. referred to in the agreed bundle 222
Letter from C.H. Duff to Building Authority with Form 13 and Form 15
4/12/76
(Contd.)

3rd December 1976

To the Building Authority,

I/We, (name of applicant in block letters) C. H. DUFF
apply for your consent to the commencement and carrying out of the following works (here specify the type of work, e.g. building works or street works or, if the application is in respect of part only of building works, specify the part in respect of which the application is made)—


Site formation, Block "A", Stage I
at (No. and name of street) 12 Babington Path & Kotewall Road
on (Lot No./Permit Area No.) I.L. 3171

1. The following plans of the above works have been approved by you—

Plans.	Date of notice of approval	B.O.O. Ref. No.
Site formation, Stage I Block "A"	29th November, 1976	1/2253/69
Caisson Amendments (access road)	19th March, 1976	3/2253/69

3. *The certificate, Form 10, required by regulation 17 of the Building (Administration) Regulations, in connexion with the proposed structural use of steel and/or reinforced concrete, was submitted on 19.....

4. *The certificate (stability certificates) required by regulation 18 of the Building (Administration) Regulations was submitted on 19.....


Signature of applicant.

* Delete if not applicable.

Handwritten notes: "H. C. H." and "3 Dec. 1976"

Supreme
Court of
Hong Kong

No. referred
to in the
agreed
bundle
242
Statutory
Declaration
by Charles
Duff with
statement
annexed
dated
5th August
1977

1975, No. 2738
IN THE SUPREME COURT OF HONG KONG
HIGH COURT

BETWEEN CHEUNG KUNG LEUNG 1st Plaintiff
FOU YOU SING 2nd Plaintiff
and
CHINACHEM INVESTMENT CO. LTD. Defendant

1975, No. 2739
IN THE SUPREME COURT OF HONG KONG
HIGH COURT

BETWEEN WONG LAI YING and OTHERS Plaintiffs
and
CHINACHEM INVESTMENT CO. LTD. Defendant

10

**STATUTORY DECLARATION
by CHARLES DUFF**

I, CHARLES DUFF of 58 Cape Mansion, 9th floor, Mount Davis Road, Hong Kong, Chartered civil engineer, solemnly, sincerely, declare that the facts set out in the annexed statement under the heading of "Proof of Evidence of Mr. Charles Duff" and which I have initialled are true and correct.

And I make this solemn declaration conscientiously believing the same to be true and by virtue of the Oaths and Declarations Ordinance. 20

DECLARED at the Courts of Justice,
Victoria, Hong Kong
this 5th day of August 1977. } (Sd.) Charles Duff

Before me,
(Sd.) Mak Chek Hung
Clerk-in-charge, Supreme Court Registry
Judiciary.

Commissioner for Oaths.

PROOF OF EVIDENCE OF MR. CHARLES DUFF

Re: High Court Action No. 2738 and No. 2739 of 1975 — Chinachem Investment Co. Ltd. ats. others

I, CHARLES DUFF of 58, Cape Mansion, 9th floor, Mount Davis Road, Hong Kong, civil engineer, will say as follows:—

1. I am a chartered civil engineer by profession, and an authorised person as defined by the Building Ordinance of Hong Kong. I hold a Bachelor of Science degree in engineering from London University (1925) and am a member of the Institution of Civil Engineers. I have had extensive experience in the design and construction of a wide range of civil engineering structures including many multi-storey buildings. I have also acted as consulting engineer in a number of projects in Hong Kong where slope stability problems were involved. I first came and worked in Hong Kong as a civil engineer in 1946. 10
2. I was appointed on the 3rd December 1971 by Chinachem Investment Co. Ltd. (hereinafter called 'the Defendant') to take charge of the building project at Inland Lot No. 8171 (Babington Path and Kotewall Road) where the Defendant intended to erect two residential blocks of building to be known as the University Heights. At that time, I expected the project to finish in 24 months' time.
3. The general building plans were approved on the 8th September 1970, but had to be amended. The amended plans were then approved on the 9th October 1971. The consent to the carrying out of the construction work was granted by the Building Authority on 17th November 1971. The Defendant appointed as its contractor Chi Fung Investment Co. Ltd., one of its associate companies. The construction work commenced on the 11th December 1971 in accordance with plans and specifications approved by the Building Authority of the Public Works Department of Hong Kong. 20
4. The structural plans for the access road ramp and part of the retaining wall were approved by the Building Authority on the 25th February 1972 and I submitted amended structural details and calculations of the main retaining wall to the Building Authority for their approval on the 27th May 1972. These plans were never approved because the landslip intervened. 30
5. On the 18th June 1972 a massive landslip took place affecting the Defendant's construction site. By then, the foundation work for Block B, the lower of the two blocks of University Heights had been laid and the reinforcement concrete work had reached one storey in height (i.e. the lower car park). The landslip resulted in thousands of tons of earth and rocks coming down from Po Shan Road and covering the eastern half of the building site. At places, such earth and rocks exceed 25 feet in height.
6. The government took over control of the site and the adjacent area for the 5 months which followed, in order to conduct rescue and salvage work and in particular to remove debris from the collapsed Kotewall Court. Access to the construction site was denied to me and the Defendant during this 5 month-period. 40

7. The Defendants solicitors Messrs. F. Zimmern & Co. wrote to the Director of Public Works in August but failed to obtain consent for the Defendant to resume work on the construction site.

8. On 27th October 1972, I wrote to the Director of Public Works summarising the position and requested early permission to recommence work. Mr. J. G. Stean of the Building Authority replied by letter dated 3rd November 1972 wherein he said the whole construction project had to be re-considered and further plans submitted and approved before work could be resumed.

9. After receipt of the letter, I went to see the Chief Building Surveyor and the newly appointed Civil Engineer of the Building Authority, Mr. Brian Boys. After several conferences with them, I submitted an application for permission to remove the spoil and debris and to demolish the damaged reinforced concrete framework on the construction site. I enclosed a sketch plan showing the extent of the work I proposed to do. On the 17th December 1972, the Building Authority authorised me to remove the spoil and debris from the site but not to demolish the damaged R.C.C. work. 10

10. I persisted in my application for permission to demolish the R.C.C. work and after several meetings with the Building Surveyor and a visit to the site with the engineer from the Building Authority I submitted another plan indicating the scope of the demolition which I proposed to do. Eventually on the 24th January 1973, I was allowed to proceed with the demolition of the R.C.C. framework on the building site. 20

11. During the period from February to June 1973 several thousand truck loads of debris were removed from the construction site. The Police kept a close eye on the operation and greatly impeded its progress because they frequently wanted to examine each scoop of the bulldozer, because it was rumoured that valuable treasures were buried among the debris, and in fact, personal belongings of the disaster victims were frequently unearthed. The Public Works Department had said in its letter of the 14th August 1972 that any salvaged material temporarily deposited on the Defendant's construction site would be removed. This it had failed to do thoroughly. The Defendant also had the additional work of clearing part of Kotewall Court site as well as the 10 ft. strip of Crown land along the eastern boundary of the construction site. I also had to construct a temporary drain along this strip to replace the original nullah. All these were necessary otherwise the removal of spoil from the construction site would create a dangerous situation for the Defendant's workmen. 30

12. The Hong Kong rainy season starts in June and it was imperative that the final site formation and drainage work, trimming of the slopes and the application of soil cement plaster to the slopes in order to protect them must be urgently completed before the coming of June. I did not even wait for official permission before going ahead with these safety measures. 40

13. Mr. J. G. Stean of the Building Authority had written me a letter dated 3rd November 1972 and said that the construction work could be recommenced, but official "consent" had to be obtained. He required calculations to support my proposal for site formation and foundation which must be based on data obtained from

a comprehensive site investigation. Such calculations must also make allowance for fluctuations in the natural water table and the saturation of the surface soil, equivalent to at least the condition experienced in June 1972. In addition, my proposals need to be supported by a construction programme and plans and notes clearly indicating the steps to be taken. I then held discussions with a consultant engineering firm, Scott Wilson Kirkpatrick & Partners which is a firm of international standing and which has its head office in London. They have specialists in geo-technical problems. They were given plans and full details of the building project before deciding on whether to accept an appointment from the Defendant and their terms of appointment.

10

14. On the 14th August 1973, draft 'terms of engagement' were submitted by Scott Wilson Kirkpatrick & Partners to the Defendant. Immediate verbal acceptance was given by the Defendant and Scott Wilson Kirkpatrick & Partners (hereinafter referred to as Scott Wilson) commenced preparatory work under their terms of engagement. A formal agreement appointing Scott Wilson was signed on the 8th September 1973.

15. During the period from September 1973 to May 1974, the following items of work were carried out under the direction of Scott Wilson in collaboration with me:—

- (a) A complete re-examination of the original foundation design and all previous site investigations were studied,
- (b) The site was completely re-surveyed;
- (c) A comprehensive site investigation was carried out including penetration tests and a range of laboratory tests on soil samples, upon which Scott Wilson were to base their subsequent proposals;
- (d) Regular observation on various points of the construction site to determine the seasonal variations in the levels of underground water;
- (e) Correlation of all observed data and the preparation of an exhaustive series of calculations relating to the stability of the site and all adjoining land.

20

16. A preliminary draft report was submitted by Scott Wilson in June 1974. I studied this carefully and proposed amendments. These necessitated a number of lengthy discussion between myself and Dr. H. Y. Wong of Scott Wilson who was primarily responsible for the drafting of the report, followed by a revision and enlargement of the preliminary report. The revised and enlarged report was submitted by Scott Wilson in August 1974.

30

17. After a thorough and careful study of the report, whilst generally agreeing with the revised and enlarged report, I still felt that there were some points which required amendments and/or clarifications. It was however decided that this report should be lodged with the Civil Engineering office of the Building Authority for consideration and comment. Unfortunately it was quite some time after the lodging of the report that the Chief Civil Engineer of the Building Authority, Mr. Brian Boys, could arrange a meeting with me to discuss the contents of the report on the

40

19th December 1974.

18. On the 19th December 1974 I attended Mr. Brian Boys at his office. Also attending the meeting were Mr. Elliott and Dr. H. Y. Wong of Scott Wilson. During the discussion, Mr. Boys recommended some other modifications and asked for more detailed information which in practical terms called for further tests and calculations.

19. Dr. H. Y. Wong and I further studied Mr. Boys' recommendations and requirements and had yet another meeting with him. At this second meeting the scope and substance of the required additional investigation and amendment were discussed in greater detail to ensure that all the necessary ground would be covered. Meeting these requirements involved a considerable amount of time-consuming work including preparation of further drawings and additional series of slope stability investigation together with supporting calculations for the proposed caisson-type retaining structure. Scott Wilson's addendum report (covering these additional items) though dated April 1975 were not submitted to the Defendant until 7th May 1975.

10

20. I sent off two copies of each of Scott Wilson's report (August 1974 and April 1975 respectively) to the Building Surveyor and the Structural Engineers of the Building Authority for their consideration with a request for an early meeting to discuss the same. Even then I realized that it would take them, as opposed to the civil engineering section, quite sometime to study with and absorb the reports with its numerous details.

20

21. On the 23rd May 1975, another conference was held in Mr. Brian Boys' office. Present were Mr. Boys and Mr. Pitt Jones of the Building Authority, Mr. M. Guildford and Dr. H. Y. Wong of Scott Wilson and myself. Though he considered the proposals in the reports acceptable in principle, Mr. Boys asked for yet further clarifications of a few relatively minor points.

22. In response to Mr. Boys' request for clarification, Scott Wilson submitted amended pages on the 16th June 1975 for inclusion in their report dated April 1975. I submitted these amendments to the Building Authority on the 19th June 1975 and proceeded with drawings and calculations based on the final report.

30

23. On the 10th July 1975 I submitted to the Building Authority an application (accompanied by plans) for permission to carry out excavation work for caissons. Not having had any response from the Building Authority, I called at the offices of the Building Authority on 7th August 1975 when I found out unofficially that the caisson plans would be dis-approved. Thereupon I withdrew the application and the plans. I amended and re-submitted them on the 8th August 1975.

24. On the 18th August 1975, I was told unofficially that the caisson plans had been approved and that the formal approval was merely awaiting the signature of the Chief Building Surveyor. Thereupon I instructed the Defendant's contractors to make preliminary arrangements on 23rd August 1975 preparatory to commencing work. At this time, repair to the temporary drainage work and coating to slopes were in progress in accordance with instructions contained in Building Authority's

40

Supreme Court of Hong Kong

letter dated 17th June 1975.

No. referred to in the agreed bundle 242
Statutory Declaration by Charles Duff with statement annexed dated 5th August 1977
(Contd.)

25. On the 21st August 1975 a letter from "A nearby resident" was published in the South China Morning Post which is the leading English language newspaper in Hong Kong. The writer referred to building work being carried on at the site and wanted to know whether approval and consent for the commencement of the building work had been given, and whether such work would in any way affect the 'stable equilibrium' of the area. The Public Works Department was obviously perturbed by the publication of this letter and called for an urgent meeting at the site on the 23rd August at 9.30 a.m. The Defendant's contractors had in the meantime been engaged on site preparation and some exploratory excavation works around the completed footings. These in themselves do not require the prior consent of the Building Authority but they found on the 23rd August that the inspection work being done was beyond that normally regarded as site preparation and investigation, and because of this a 'cease work order' was issued requiring all work on site to stop. In an open letter published on the 25th August 1975 on the South China Morning Post, the spokesman for the Principal Government Building Surveyor assured "A nearby resident" that the 'cease work order' would remain in force until the Building Ordinance office was satisfied as to all aspects of the work proposed by the developer.

10

26. At the inspection on the 23rd August 1975, I was requested to attend at the office of the Principal Government Building Surveyor on the 26th August. I was told then that consent would not be given for the excavation of the caissons until all details (including full structural calculations) of the proposed work had been submitted to and approved by the Building Authority.

20

27. On the 15th September 1975, I submitted to the Building Authority a complete set of plans, structural details and calculation for caissons. I considered it important that work should be done before the approach of the rainy season and asked the Building Authority to deal with the matter on an urgent basis. I was however told that no priority would be given to the consideration of the plans etc.

28. After one disapproval, the caisson plans were finally approved on the 17th November 1975. On the 24th November the cease work order was lifted. Caisson excavation work commenced on the 29th November 1975.

30

RAINSTORM DISASTERS 1972

FINAL REPORT OF THE COMMISSION OF INQUIRY

FINAL REPORT
OF THE
COMMISSION OF INQUIRY
INTO THE
RAINSTORM DISASTERS
1972

November 1972

PRINTED AND PUBLISHED BY THE GOVERNMENT PRINTER
HONG KONG

TABLE OF CONTENTS

<i>Chapter</i>	<i>Subject</i>	<i>Section</i>	<i>Subject</i>	<i>Paragraphs</i>
I	INTRODUCTION			1-5
II	BACKGROUND INFORMATION	1	Geographical	6-9
		2	Geological	10-29
		3	Seismological	30-31
		4	Meteorological	32-34
		5	Rainfall	35-42
		6	Land Policy and Building Development	43-52
		7	Legal	53-55
III	THE DISASTER AT PO SHAN ROAD	1	History	56-60
		2	The Redevelopment of Inland Lot 2260	61-92
		3	Events on June 16, 1972	93-97
		4	Events on June 17, 1972	98-106
		5	Events before 5 p.m. on June 18, 1972	107-111
		6	The Landslip at 5 p.m., on June 18, 1972	112-116
		7	The Major Landslip on June 18, 1972	117-124
		8	Rescue Work	125-198
		9	Recovery of Bodies by Demolition Work	199-202
		10	Remedial Works done by the Public Works Department after the disaster	203-204
IV	THE DISASTER AT SHIU FAI TERRACE (WAN CHAI)	1	Introduction	205-210
		2	The Landslips	211-212
		3	Historical and Technical Considerations	213-226
V	INCIDENTS IN OTHER AREAS			227
		1	Ap Lei Chau	228
		2	Belcher's Street (Western District)	229
		3	Bullock Lane (Wan Chai)	230-232
		4	Chai Wan	233-234
		5	Shau Kei Wan	235-243
VI	CONCLUSIONS AND RECOMMENDATIONS			244
		1	Conclusions	245-297
		2	Recommendations	298-308
VII	ACKNOWLEDGEMENTS			309-311
	INDEX TO APPENDICES			

CHAPTER I

INTRODUCTION

Since we submitted our Interim Report we have continued to hold public hearings at Victoria District Court on 13 days between August 21 and October 27, 1972. Transcripts of the whole proceedings are now available if required. There was an adjournment from August 24 to October 4, 1972, pending detailed analysis of the structure and steel and concrete samples from Kotewall Court.

2. At the beginning of September 1972 Mr. R. G. PENLINGTON, our legal adviser, wrote to those members of the public who had given evidence in public hearings or who had submitted statements as exhibits on the Po Shan Road disaster, asking them if they had anything further to add to their evidence or statements. They were invited to contact him as soon as possible, and, in any case, not later than a certain date, if they had such additional information. However, no further evidence resulted from these invitations.

3. On September 11, 1972 a press release was issued, in which Mr. PENLINGTON again appealed to any other members of the public who might have information connected with the events before, during or after the landslips at Po Shan Road to contact him. There was no response to the appeal.

4. On October 4, 1972 Government announced that funds had been provided for legal representation of all victims of the June rainstorm disasters at the hearings of the Commission. It was simultaneously announced that Mr. Charles CHING on the instruction of Patrick Chan & Co., Solicitors, had been appointed to represent victims on both sides of the harbour as well as others affected by the rainstorms, except those who had separate interests, thus requiring separate representation.

5. Evidence was received in the same way as previously. There were 31 witnesses and 83 exhibits. Appendix I is a list of witnesses, and Appendix II is a list of exhibits. Appendix III is a list of those members of the public who supplied or offered to supply us with photographs. A list of references is at Appendix IV.

CHAPTER II

BACKGROUND INFORMATION

SECTION 1 GEOGRAPHICAL

(A) INTRODUCTION

6. A comprehensive treatise on the geography and geology of Hong Kong is contained in the report, Hong Kong 1971. To assist ourselves in our deliberations, we have referred to this book for background information and statistics which are relevant to certain aspects of our work. Some of this information is given below.

(B) AREA

7. The total land area of the Colony, including recent reclamations, is 403.7 square miles, of which Hong Kong Island itself, together with a number of small adjacent islands, comprises 29.2 square miles. Kowloon and Stonecutters Island have an area of 4.1 square miles. The New Territories, which consist of part of the mainland and more than 230 islands, have a total area of 370.4 square miles.

8. Owing to the hilly topography, agricultural land is extremely restricted. The most important area is the alluvial plain around Yuen Long in the Deep Bay area. The upland areas are mostly covered with foliage and in places severely eroded. Afforestation has been developed since 1945, but the area covered is still relatively small. The most important function of the uplands is for water catchment areas. To some extent this is now conflicting with the needs of the crowded urban areas for recreational space, and problems of rural conservation in this and other aspects are becoming pressing.

(C) POPULATION

9. The post-war years have brought to Hong Kong a veritable population explosion—from about 600,000 persons in August 1945 to over 4,000,000 at the end of 1971. This latter figure has made Hong Kong one of the most densely populated areas in the world, with an average density of about 9,800 persons per square mile for the whole Colony. The 1971 census revealed that Mongkok, with over 415,280 persons per square mile, was then the most densely populated district. This is about 10 times greater than Tokyo city proper.

SECTION 2 GEOLOGICAL

(A) INTRODUCTION

10. Structurally, Hong Kong is part of the South China Massif and consists of a main peninsula with numerous irregularly shaped islands. It is a partially drowned upland region with a long and deeply indented coastline. Apart from an alluvial plain in the north-western part of the peninsula and close to the China border, which is reserved primarily for agricultural development, and some minor flat areas at the mouths of streams, the land slopes steeply upwards from the shore-line, reaching peaks ranging in height from 1,500 to 3,130 feet.

11. Distribution of the major rock types is shown in Figure 1. Except for the alluvial plain mentioned above, two acidigneous rocks—an extrusive volcanic rock of a rhyolitic nature and a medium-grained granite—make up the bulk of the land mass. Both types of rocks may be cut by dykes of porphyritic granite, granodiorite porphyry or dolerite, and the boundaries between the two main types show a normal intrusive contact. The main rock formation are deeply weathered and heavily jointed and fissured, the spacing of the joints ranging from around three inches to about five feet and being wider in the granites than in the volcanics. Numerous faults have been discovered and probably many more are present but are masked by the existing soil cover.

12. Geologically, the soils of Hong Kong are either residual or transported: the residual soils can be classified according to the nature of the parent rock from which they have been derived, whereas the transported soils are classified in accordance with the type of transporting agency.

(B) RESIDUAL SOILS

13. The residual soils are produced by the *in situ* decomposition of the underlying rock owing to percolation of water through the rock fissures and into the rock pores, thus breaking down the more unstable rock minerals such as feldspar, biotite and epidote. The chemical breakdown is particularly active in hot humid conditions. It takes place more rapidly beneath a soil cover, as this holds the water and soil acids and thus intensifies attack.

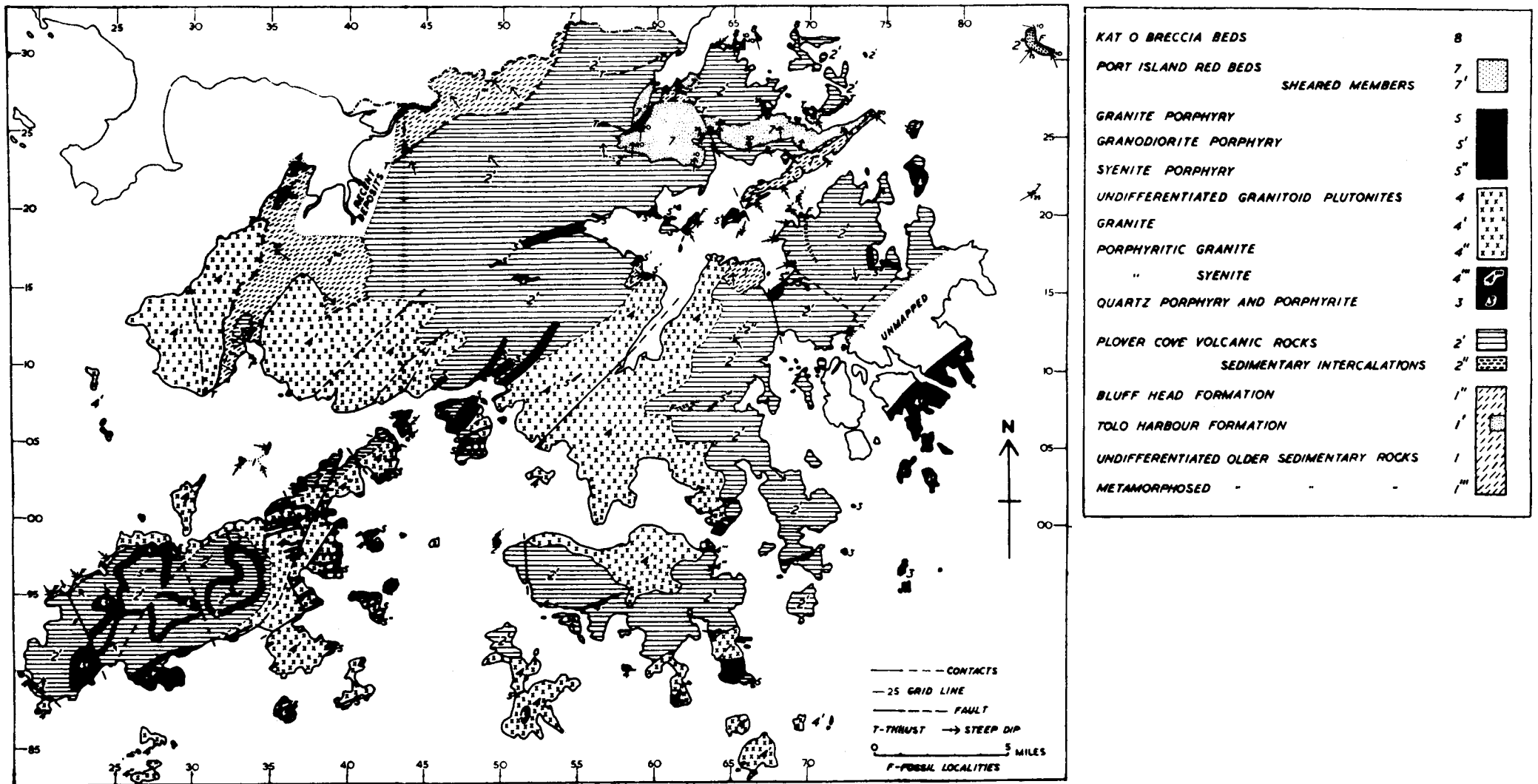
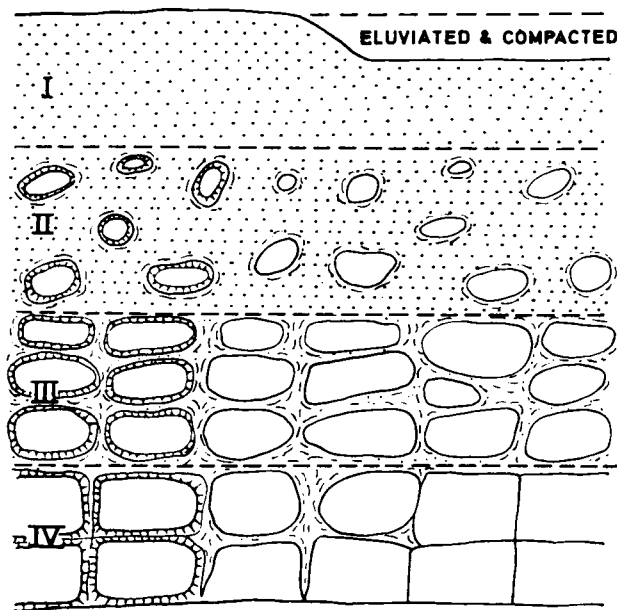


FIG. 1.—GEOLOGICAL MAP OF HONG KONG

(From Ruxton, B. P., 1960 "The Geology of Hong Kong"
 Quart. Geol. Soc. London vol. CXV)



ZONES OF A MATURE PROFILE OF WEATHERING
ON GRANITE

The iron staining inside the core stones is
shown only on the left-hand side.

Figure 2

(From RUXTON, B. P. & BERRY, L. (1957), *Weathering of Granite and Associated Erosional Features in Hong Kong*, Bulletin of the Geological Society of America, Vol. 68, pp. 1263-1292.)

14. In mineral content the granites and volcanics are similar, but in the fresh granite the quartz crystals range in size from about 0.2 to 0.5 millimetres, whereas in the volcanics the size range is from about 0.02 to 0.2 millimetres. Since the size of the rock pores is roughly proportional to the size of the mineral grains, it follows that, even though both rock types have approximately the same volume porosity, the rate of diffusion of water is greater in the coarse-grained, rocks and hence the granites decompose more readily than the volcanics. Observations made indicate depths of decomposition ranging from 20 to 200 feet in the granites, compared with 10 to 50 feet in the volcanics.

15. The nature and variability of the weathered rock have been described by Ruxton and Berry who illustrated the decomposition process diagrammatically as in Figure 2. Decomposition starts in the joints and fissures and works inwards to produce a matrix of decomposed rock around isolated "core-stones" or boulders. In the final stage the rock is completely decomposed, leaving no trace of the original rock structure. For this reason classification of the weathered material into grades becomes necessary for engineering purposes.

16. The following broad divisions for granites, after Moye (Reference 1, Appendix IV), form a useful basis for classification:—

(1) *Granitic soil*

This description applies to granite which has been completely decomposed by *in situ* weathering, leaving no trace of the original granitic fabric. The material consists essentially of quartz and kaolin with a clay-content ranging from 20% to 30%. In the aerated zone close to the surface ferric oxide, resulting from the oxidation of minerals containing iron, gives a characteristic red colour to the soil which is known locally as "red earth".

(2) *Completely weathered granite*

This description covers granite which, although completely decomposed, still possesses recognizable granitic fabric. The original feldspars are completely decomposed and the biotite mica decomposed to varying degrees. When immersed in water the material disintegrates into sandy clay. Generally, it has a brownish colour owing to limonite staining and cannot be sampled by cores using diamond drilling techniques.

(3) *Highly weathered granite*

This material will not disintegrate when immersed in water, and hence can be recovered as cores if care is taken in diamond drilling. But if NX drilling is used the material is often so weak that pieces of the cores can be readily broken and crumbled in the hand. Limonite staining is also present.

(4) *Moderately weathered granite*

This category applies to rock which, although stained reddish-brown and considerably weathered, possesses enough strength so that pieces of NX drill core cannot be broken in the hand.

(5) *Slightly weathered granite*

Distinct evidence of *in situ* weathering occurs throughout the fabric of this category of rock, and slight limonite staining and decomposition of feldspars is evident. But the strength approaches that of fresh granite.

(6) *Fresh granite*

This description applies to the bedrock underlying the weathered zones, and includes that showing a small amount of limonite staining caused by movement of water along the joints.

17. Although the above groupings refer to weathered granite they can also be applied to form broad sub-divisions of the weathered volcanic rocks. In the latter type of rocks, however, the products of weathering are more varied in character than in the granites.

(C) TRANSPORTED SOILS

18. The transported soils are produced from the residual soils either as landslip debris, known as colluvium, or through erosion of the soil surface by rainstorms and streams as alluvium. Other types of transported soil arise from marine deposits, beach sands and man-made fill.

19. Where the slopes are steep the weathered material does not remain *in situ* but migrates downslope. This migration may occur, particle by particle, under the action of wind and rain. But in Hong Kong it is much more evident as a mass movement which is particularly noticeable following periods of heavy rain when large masses break off and slide or roll down the hillsides.

20. The particle size gradings of the colluvium and fill are, of course, the same as those of the residual soils from which they are formed. The main differences between the two groups are that the structure and texture of the residual soils have been destroyed by the sliding and filling processes, and the resulting debris is thoroughly mixed. It is well to remember that undisturbed residual soil can be found underlying colluvium or fill.

21. Additional information on the geology of Hong Kong is given by Mr. D. J. EASTAFF⁽¹⁾ in Appendix V.

(D) SLOPE STABILITY PROBLEMS IN TROPICAL ENVIRONMENTS

22. The heterogeneous nature of rock and soil strata frequently makes realistic analysis of the stability of cut slopes difficult. In these circumstances, analytical design is seldom possible and rarely economically justifiable. The logical alternative is to evolve empirical design methods based on experience gained from systematic collection of slope performance data.

23. In tropical regions there are two additional factors affecting slope stability which are not present to the same extent in temperate climates. These are:—

- (1) the rate of softening of weathered rock on exposure to the tropical climate, and
- (2) the rate of surface erosion.

Both of these are extremely difficult to predict quantitatively.

24. Erosion and rock softening, which are primarily caused by water, are complementary processes, the former frequently providing the means whereby the latter develops. If the surface of a slope is protected against erosion, softening of the underlying material is greatly retarded. But if the protection against erosion is effected by luxuriant vegetation, requiring a relatively thick soil mantle to support it, the longer retention of rainfall within the soil mantle tends to produce more rapid decomposition of the underlying rock strata. Although some theoretical studies have been carried out relating to the influence of rainstorms on slope stability, which are considered elsewhere in this Chapter (see paragraph 37 *et seq*), the engineer must rely largely on past experience and observation in assessing the rate of softening of any particular slope in a tropical situation.

(1) Mr. D. J. EASTAFF, B.Sc. (Geol.), M.I.C.E., Chief Geologist of Binnie and Partners, Consulting Engineers for the Public Works Department.

25. In dealing with cuttings both erosion and softening are important. However, in the case of embankments, the main problem is generally surface erosion, since embankments, if properly constructed, tend to be relatively dense and homogeneous internally and are unlikely to include water-bearing strata.

26. For private building works in Hong Kong it is necessary for all authorized architects⁽²⁾ to comply with the Building Regulations currently in force at the time when plans are approved for any particular project. The current requirements for cutting and filling are set out, in general, in Circular Letter No. 27, issued by the Buildings Ordinance Office, Public Works Department on November 18, 1963 and circulated to authorized architects. The relevant section reads as follows:—

“(7) Site formation. The Hong Kong Society of Architects requested a general statement of requirements for cutting and filling.

- (a) The Building Authority will offer no objections to an angle of slope not greater than 35° for filling and 50° for cutting.
- (b) Should an angle steeper than the above for cutting or filling be proposed, the authorized architect should confirm in writing to the Building Authority that he has inspected and investigated the nature of the soil and is satisfied that such slope is stable.
- (c) Adequate protective cover and surface drains should be provided for cutting and filling slopes—chunam and turfing surfaces are generally used for cutting slopes, but for filling slopes, turfing is more suitable.
- (d) For cuttings exceeding 30 ft. high, provision of berms (minimum 3" wide) with 12" surface channels placed away from edges of berms has been adopted in general practice. ‘Herring bone’ construction of surface drains should also be considered as an effective means of intercepting the surface water.”

27. For the soil and climatic conditions of Hong Kong we consider the above administrative measures to be rational and reasonable and to be in accord with general engineering practice in other countries where soil and climatic conditions of a similar character may be encountered.

28. As a result of a survey of road cuttings carried out in Western Malaysia, Mr. J. N. BULMAN of the Road Research Laboratory, Ministry of Transport, United Kingdom, recommends slope angles of 50—60 degrees for cuttings in coarse-grained weathered igneous rock, and slope angles of 40—45 degrees for fine-grained rock of similar character. (Reference 3, Appendix IV). He defines weathered rock as coarse-grained when 40% or more of its particles are retained on the B.S. 25 sieve, (0.6 millimetre aperture), and fine-grained when less than 40% are retained on this sieve. Based on the investigation of Hong Kong soils carried out by Mr. P. LUMB⁽³⁾, coarse-grained sub-division corresponds broadly with decomposed granite and fine-grained rock with decomposed volcanics.

29. In considering the risk of landslips in the area the Joint Engineers for the Plover Cove Water Supply Scheme (see Reference 3, Appendix IV) had this to say:—

“Another common location for slips is the outside of river bends where undercutting is active. It is believed that slips occurring at the latter location are more numerous in the volcanic than the granite areas, presumably because the residual soil of the former has a higher fines content and thus generally a lower shear strength than the latter. In Lead Mine Pass one such slip had occurred on a slope of 26° but usually the slopes on which slips occur are steeper, averaging 30°. In the case of granite, such slopes are generally 5° steeper than for volcanics. If any engineering structures are sited at the foot of steeper slopes than those quoted above, protective measures should be considered. Slopes exposed in reservoirs have been measured and indicate that, for the weathered granite within Jubilee Reservoir and Kowloon Reservoir, 30° slopes and flatter are stable. It is understood that this figure is in accord with the experience of the Snowy Mountains Authority, Australia, in the operation of Guthega Reservoir.”

SECTION 3

SEISMOLOGICAL

30. We have considered earthquake risk as a possible cause of landslips in Hong Kong. Evidence submitted to us showed that from September 1921 to December 1969, 69 earthquakes are known to have been felt by residents in Hong Kong. On average, about one earthquake was felt each year between 1921 and 1940 and

(2) An authorized architect is not necessarily an architect by profession. He can be an engineer, a surveyor or even any person with 15 years practical experience under a practising architect and engineer of 35 years of age or over. The qualifications required are set out in Regulations 3, 4 and 5 of the Building (Administration) Regulations.

(3) Mr. P. LUMB, M.Sc. (Eng.), F.I.C.E., F.G.S., Reader in Civil Engineering, University of Hong Kong.

about three earthquakes were felt annually in the more recent period from 1951 to 1969. Most of the shocks felt were shallow and emanated from the Ho Yuen area of Kwantung, centred about 100 miles north-northeast of Hong Kong. Others came from epicentres in the bed of the China Sea to the south and south-east of Swatow and to the south of the Pratas Shoal. Many originated from the Circum-Pacific Seismic Belt, and a few had epicentres as far north as in the Yangtze Valley.

31. The most severe earthquake shock experienced in Hong Kong occurred on February 13, 1918, and the strongest shock so far recorded since seismographs have been in operation here was of intensity 5 on the Modified Mercalli Scale. It occurred on March, 18th 1962 and caused displacement of small objects, rattling of windows and doors and loosening of plaster.

SECTION 4 METEOROLOGICAL

32. A comprehensive picture of the general rainfall characteristics of Hong Kong together with other relevant meteorological and seismological information was presented to us by Mr. G. J. BELL, Director of the Royal Observatory, Hong Kong. Mr. BELL's general evidence was submitted in the form of four publications (see References 4-6, Appendix IV) prepared by the Royal Observatory. One of these, describing the existing Thunderstorm and Heavy Rain Warning Service, very pertinent to this Inquiry, is reproduced in Appendix VI.

33. Estimates of extreme depth and extreme intensity of rainfall in Hong Kong corresponding to various return periods are shown in Table 1. We appreciate the limitations under which estimates contained in that Table have been made, and we consider the estimates to be as accurate as available data and meteorological knowledge permit.

34. Evidence submitted by Mr. BELL relating to the Royal Observatory rainfall records for the first half of 1972 are considered in the following Section.

SECTION 5 RAINFALL

35. The evidence submitted to us leaves no room for doubt that the heavy rainfall which occurred in May and June 1972 played the dominant role in causing the landslips which resulted in such tragic loss of life and property. One of the tasks facing us has been that of determining whether the rainfall which culminated in the June landslips could have been anticipated with reasonable foreseeability. In examining this aspect of our work we relied principally on the testimony of Mr. G. J. BELL.

36. In evidence, Mr. BELL stated that for each of the periods January-June; April-June; and May-June, 1972 was the second wettest year on record at the Royal Observatory. For the periods in question the rainfall was exceeded only in 1889 during the 82 years of rainfall records available. In a more detailed comparison of the rainfall of 1972 with that of other years, Mr. BELL produced the following records:—

<i>January to June</i> <i>6 months</i>	1.	1889	1899.0 mm	
	2.	1972	1658.6 mm	
	3.	1966	1656.8 mm	
<i>April, May, June</i> <i>3 months</i>	1.	1889	1799.0 mm	
	2.	1972	1588.3 mm	
	3.	1966	1440.3 mm	
<i>May and June</i> <i>2 months</i>	1.	1889	1487.3 mm	
	2.	1972	1453.5 mm	
	3.	1957	1356.5 mm	
<i>June</i> <i>1 month</i>	1.	1966	962.9 mm	
	2.	1959	913.7 mm	
	3.	1892	873.1 mm	
	4.	1916	817.4 mm	
	5.	1972	799.0 mm	up to 12 noon on June 27, 1972
<i>May</i> <i>1 month</i>	1.	1889	1240.5 mm	
	2.	1957	894.2 mm	
	3.	1921	858.1 mm	
	4.	1891	711.1 mm	
	5.	1902	678.9 mm	
	6.	1972	654.5 mm	

TABLE 1(A) EXTREME DEPTH OF RAINFALL CORRESPONDING TO VARIOUS RETURN PERIODS

Time Interval	PARAMETERS		RETURN PERIOD (YEARS)											
	μ	$1/\alpha$	2	5	10	20	50	100	200	500	1000	2000	5000	10000
	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
31 Days	597.8040	155.4216	654.8	830.9	947.6	1059.4	1204.2	1312.8	1420.9	1563.5	1671.3	1779.1	1921.5	2029.3
15 "	417.9600	143.3160	470.5	632.9	740.5	843.6	977.2	1077.2	1176.9	1308.5	1407.9	1507.3	1638.6	1737.9
7 "	305.7600	127.4448	352.5	496.9	592.6	684.3	803.0	892.0	980.7	1097.7	1186.1	1274.4	1391.2	1479.6
5 "	274.9200	120.0000	318.9	454.9	545.0	631.3	743.1	826.9	910.4	1020.6	1103.8	1187.0	1297.0	1380.2
4 "	258.4320	115.3920	300.7	431.5	518.1	601.2	708.7	789.3	869.5	975.4	1055.5	1135.5	1241.2	1321.2
3 "	238.3920	109.0080	278.3	401.9	483.7	562.2	663.7	739.9	815.7	915.7	991.3	1066.9	1166.8	1242.4
2 "	211.9680	99.1200	248.3	360.6	435.0	506.4	598.7	667.9	736.9	827.9	896.6	965.3	1056.2	1124.9
24 Hours	173.8560	85.1520	205.1	301.6	365.5	426.8	506.1	565.6	624.8	703.0	762.0	821.1	899.1	958.1
18 "	158.5800	76.7880	186.7	273.8	331.4	386.7	458.2	511.8	565.2	635.7	689.0	742.2	812.6	865.8
12 "	137.7600	65.1960	161.7	235.5	284.5	331.4	392.1	437.7	483.0	542.9	588.1	633.3	693.0	738.2
8 "	121.1200	56.6320	141.9	206.1	248.6	289.3	342.1	381.6	421.0	473.0	512.3	551.6	603.5	642.7
6 "	109.2000	49.9080	127.5	184.1	221.5	257.4	303.9	338.8	373.5	419.3	453.9	488.5	534.3	568.9
4 "	93.7600	40.4800	108.6	154.5	184.9	214.0	251.7	280.0	308.1	345.3	373.4	401.4	438.5	466.6
2 "	72.6200	26.9800	82.5	113.1	133.3	152.8	177.9	196.7	215.5	240.3	259.0	277.7	302.4	321.1

1(B) EXTREME INTENSITY OF RAINFALL CORRESPONDING TO VARIOUS RETURN PERIODS

Time Interval	PARAMETERS		RETURN PERIOD (YEARS)											
	μ	$1/\alpha$	2	5	10	20	50	100	200	500	1000	2000	5000	10000
	(mm hr ⁻¹)	(mm hr ⁻¹)	(mm hr ⁻¹)	(mm hr ⁻¹)	(mm hr ⁻¹)	(mm hr ⁻¹)	(mm hr ⁻¹)	(mm hr ⁻¹)	(mm hr ⁻¹)	(mm hr ⁻¹)	(mm hr ⁻¹)	(mm hr ⁻¹)	(mm hr ⁻¹)	(mm hr ⁻¹)
60 minutes	54.9500	16.2200	60.9	79.3	91.5	103.1	118.2	129.6	140.8	155.7	167.0	178.2	193.1	204.3
30 "	77.6200	19.5000	84.8	106.9	121.5	135.5	153.7	167.3	180.9	198.8	212.3	225.8	243.7	257.2
15 "	96.6100	23.4400	105.2	131.8	149.4	166.2	188.1	204.4	220.7	242.3	258.5	274.8	296.3	312.5
10 "	107.1996	25.4100	116.5	145.3	164.4	182.7	206.3	224.1	241.8	265.1	282.7	300.3	323.6	341.2
5 "	123.0000	29.8500	133.9	167.8	190.2	211.7	239.5	260.3	281.1	308.5	329.2	349.9	377.2	397.9
2 "	147.9000	36.3090	161.2	202.4	229.6	255.7	289.6	314.9	340.2	373.5	398.7	423.9	457.1	482.3
60 seconds	167.8980	41.6880	183.2	230.4	261.7	291.7	330.6	359.7	388.7	426.9	455.8	484.8	523.0	551.9
30 "	190.5000	47.8560	208.0	262.3	298.2	332.6	377.2	410.6	443.9	487.9	521.1	554.2	598.1	631.3
15 "	213.8160	54.9600	234.0	296.3	337.5	377.1	428.3	466.6	504.9	555.3	593.4	631.6	681.9	720.0

15 days	1.	1889	1238.4 mm	May 19 – June 2
	2.	1959	858.1 mm	June 1 – 15
	3.	1966	840.9 mm	June 4 – 18
	4.	1972	793.1 mm	May 19 – June 2
7 days	1.	1889	924.6 mm	May 25 – 31
	2.	1959	753.8 mm	June 9 – 15
	3.	1972	702.9 mm	June 12 – 18
5 days	1.	1889	908.9 mm	May 26 – 30
	2.	1959	753.4 mm	June 11 – 15
	3.	1926	682.6 mm	July 18 – 22
	4.	1972	678.2 mm	June 14 – 18
4 days	1.	1889	870.6 mm	May 27 – 30
	2.	1959	724.6 mm	June 12 – 15
	3.	1972	677.2 mm	June 15 – 18
3 days ⁽⁴⁾	1.	1889	854.9 mm	May 28 – 30
	2.	1972	652.3 mm	June 16 – 18
2 days	1.	1899	841.2 mm	May 29 – 30
	2.	1926	561.2 mm	July 19 – 20
	3.	1966	460.4 mm	June 11 – 12
	4.	1959	452.0 mm	June 14 – 15
	5.	1972	446.4 mm	June 17 – 18

For periods less than 1 day and more than 2 hours the rainfall in the June 1972 storm does not rank in the top five. The record amounts and the 1972 amounts follow:—

1 day	1.	1926	534.0 mm	July 19
	—	1972	232.6 mm	June 18
24 hour	1.	1889	697.1 mm	May 30
	—	1972	275.1 mm	June
12 hour	1.	1926	526.7 mm	July 19
	—	1972	219.8 mm	June
8 hour	1.	1926	505.1 mm	July 19
	—	1972	199.0 mm	June
6 hour	1.	1926	430.6 mm	July 19
	—	1972	193.8 mm	June
4 hour	1.	1889	302.3 mm	May 30
	—	1972	185.1 mm	June
2 hour	1.	1926	174.4 mm	July 19
	2.	1889	167.7 mm	May 30
	3.	1966	165.9 mm	June 12
	4.	1972	161.6 mm	June 18
1 hour	1.	1966	108.2 mm	June 12
	2.	1926	100.7 mm	July 19
	3.	1968	100.0 mm	June 13
	4.	1972	98.7 mm	June 18

37. The influence of rainstorms on slope stability is governed by the infiltration capacity of the soil forming the slope; the intensity/duration curve of continuous rainfall during the storm; and the amount of rainfall that has occurred prior to the storm.

38. Based on his study of the “Effect of Rain Storms on Slope Stability” in Hong Kong (see Reference 7, Appendix IV) Mr. P. LUMB has made the following observations:—

“(1) When landslides do occur they are generally limited to the upper zones of the slope and rarely extend to a depth greater than 10 to 20 feet below the surface.

(4) The first occasion in 82 years when each of three consecutive days received more than 200 mm occurred on June 16, 17, 18, 1972.

- “(2) Only in exceptionally heavy rainstorms of the order of 15 to 20 ins. per day will any significant effect be produced in decomposed granite, whilst in decomposed volcanics significant effects will be produced every year. Although much further testing is required to determine the range in values of the various parameters it may be tentatively stated that no appreciable wetting can occur in thick decomposed granite mantles, but that in decomposed volcanics the depth of wetting is quite likely to reach 10 to 15 ft. but is very unlikely ever to exceed 20 ft.
- “(3) The effect of rainfall on the stability of slopes in thick mantles of residual soil will only be appreciable when the intensity of rainfall is of the same order of magnitude as the permeability of the soil, and moreover the duration of the rainfall must be sufficiently long for the wetting front to reach a significant depth.

These two conditions are normally satisfied for the decomposed volcanic soils but not for the decomposed granite soils. Consequently, the stability of slopes in decomposed granite is unaffected except for extremely intense rainstorms, while slopes in decomposed volcanics will be affected every year.”

39. Rainstorms are usually rated according to the average interval between their occurrence, the more severe storms having a longer recurrence interval or “return period”. Estimates of return periods for various rates of rainfall are shown in Table 1. From this Table it will be seen that the maximum rates achieved in June 1972 over periods of seven to three days would, on average, be equalled or exceeded once in an interval of from 20 to 50 years. Taken individually, the rainfalls of May and June 1972, when averaged over a 31-day period, would be equalled or exceeded, on average, in two to five years and the 15-day and two-day rainfalls have recurrence periods of between 10 and 20 years. The one hour rate of 98.7 millimetres would be equalled or exceeded once in about 20 years. These estimates make no predictions as to how late in the specified period the recurrence is likely to take place.

40. The evidence placed before us, notably the reports prepared by Mr. A. J. VAIL⁽⁵⁾ (see Appendix V) and Dr. C. L. So⁽⁶⁾ (see Reference 8, Appendix IV) support, in general, the observations and views of Mr. LUMB, referred to above. Mr. VAIL has stated that “Landslides of varying severity have always been a feature of life in Hong Kong and there is ample evidence of this to be seen from the air”. In his report he recommends that studies should be made of inhabited areas in which landslips are likely to occur, with regular inspection of such areas and patrols on a 24-hour basis during periods of prolonged or intense rainfall.

41. In dealing with the geotechnical problems of Hong Kong Mr. VAIL had this to say:—

“The decomposition of the rock, which occurs at the surface and along joint planes, produces silty and clayey material containing many boulders at an earlier stage of decomposition and, near the peaks of the hills, these tend to creep down the face of the parent rock as colluvium (slopewash) to take up more stable slopes in or near the sea.

“The slope of the hillsides formed by the in situ decomposition of the bedrock and the overlying colluvium from the peaks can be as steep as 36° from the exposed fresh rock of the peaks to a level of approximately 500 ft. P.D. and at this level there is a well defined change of slope to about 18°.

“The process of decomposition of the igneous rocks is continuing through geological time as is the migration of the colluvium down the hill slopes towards the sea. By the very nature of the process, colluvium is potentially unstable and it follows that any disturbance of the slope or any unusually severe conditions will accelerate the process of migration. Evidence of this in the form of slips in the hillsides has been apparent since the Colony was first inhabited.”

42. Taking heavy rainfall as an “unusually severe condition”, Mr. BELL’s evidence, which is readily available to the public in published form, clearly shows the regular frequencies at which such unusually severe conditions are likely to recur in Hong Kong.

SECTION 6 LAND POLICY AND BUILDING DEVELOPMENT

43. Rapid and concentrated urbanization, to meet the needs of an exploding population, are brought into sharper focus in the Colony than in other metropolitan centres, largely as a result of the scarcity of flat land, the high cost of site-forming and the comparative lack of development of new towns. Public utilities have to be made available before any land can be developed, but provision of such primary elements over much of the land area suitable for development has not been within the Colony’s capabilities until recently.

(5) Mr. A. J. VAIL, B.Sc., F.I.C.E., F.I.W.E., F.I.E. (M) of Binnie and Partners, Consulting Engineers for the Public Works Department.

(6) Dr. C. L. So, M.A., B.Sc., Ph.D., Lecturer in Geography, University of Hong Kong.

44. All the land belongs to the Crown, and, provided there is a continual demand, the sale of land forms a flexible source of revenue. The basic policy of Government is to sell leases at as high a price as the market will bear. This policy provides the guidelines for calculating the premiums to be paid on modifications of existing leases.

45. The great shortage of flat land for building; the rapidly rising demand for living and working space and the growing affluence of the population have had their inevitable influence on the low-lying central urban areas. Spiralling land values gave rise to irresistible pressure for more intensive redevelopment of these areas, where building high became the order of the day. Land suitable for development into high-rise commercial and apartment blocks was made available for such purposes by modifying and/or removing restrictive covenants in existing Crown leases.

46. With displacement of the residential population from many of the central areas to meet the growing needs of commerce, readily accessible locations and, in particular, choice residential areas became the obvious targets for developers. These were to be found at the Mid-levels, wherein were located many of the stately homes of Hong Kong—homes which had lost some of their obvious advantages as a result of high-rise development obliterating their harbour views.

47. Plate I shows the type of development in the western part of the Mid-levels prior to 1962, although the photograph was taken considerably later. The character of the neighbourhood had not begun to change. The houses were generally spacious in character and of two or three storeys, with a height not exceeding 35 feet. The height, "design and disposition" of all building developments had to be subject to the "special approval" of the Director of Public Works.

48. The general principle involved in the site formation for these mid-level projects was to cut away as little of the hillside as possible and to have several levels of cutting to minimize the risk of creating instability of the slope. A series of terraces and retaining walls were often the result.

49. The intensity of redevelopment of the Mid-levels and Pokfulam (1.93 square miles) compared with that of the Peak (3.37 square miles) by the end of the 1950's is reflected in the 1961 census population figures of 43,260 and 5,160 for these respective areas. It is interesting to note that the corresponding figures for the 1971 census were 46,300 and 8,240 respectively.

50. The relatively high density development of the Mid-levels, stemming from the demand for luxury flats, was made possible by the granting of modifications of lease conditions, although almost half the lots in the Mid-levels were without restrictions.

51. The lease modifications included a standard covenant on off-street parking. Besides, there could be only one site entry, and a proper entrance driveway had to be designed. In order to comply with this covenant, developers tended to remove as much of the hillside as possible, and to leave slopes of appreciable height behind the sites. Not, in every case, was proper attention given to the stability of these slopes. Landslips of one size or another were a regular occurrence, particularly where site formation work was being undertaken during the wet season. As a result of this cutting and formation work, almost adjoining one another, some reduction of the hillside stability must have resulted.

52. In the last few years further redevelopment of many sites on the Mid-levels has been taking place. The total revenue from the sale of land in 1971 for the Colony was over HK\$214 million; premiums from lease modifications in the same year amounted to only HK\$18 million, which is a relatively insignificant sum, particularly in view of the high cost of improving public services to meet development requirements. However, it is an established fact that much of the soil cut from the hillsides is used for land reclamation purposes at sea-level and this reclaimed land becomes available subsequently for sale or for public use.

SECTION 7

LEGAL

53. It is not without significance that of the landslips reported to have arisen from both the 1972 and the 1966 heavy rains, the vast majority occurred in the immediate vicinity of man-made excavations, cuttings and embankments, and were inextricably linked with these operations. To the extent that private development is concerned, Section 37(1) of the Buildings Ordinance provides:—

"No liability shall rest upon Government or upon any public officer by reason of the fact that any building works are carried out in accordance with the provisions of this Ordinance or that such building works or the plans thereof or materials therefor are subject to inspection or approval by a public officer, nor shall anything in this Ordinance make it obligatory for the Building Authority to inspect any building, building works or materials or the site of any proposed building to ascertain

that the provisions of this Ordinance are complied with or that plans, certificates and notices submitted to him are accurate.”

It would therefore appear, and in our view it is right and proper, that the authorized architect and the registered contractor⁽⁷⁾ are completely responsible for the proper execution of building works carried out within the Buildings Ordinance. In our opinion such responsibility should be based on what is generally accepted as sound engineering and building practice for the type of operation involved when carried out in the circumstances of Hong Kong and its climate.

54. In the execution of such operations developers, whether they represent the government or private parties, carry at least a moral responsibility to protect the lives and property of all those who may be affected by their operations. Where construction operations which might contribute towards the occurrence of landslips are carried out by the government, its agencies or agents the Buildings Ordinance may not apply by reason of Section 41(1a) therein. We hold the view, however, that the degree of culpability which we feel should be carried by the private sector for operations of this nature should be equally carried by the public sector (i.e. government, its agencies and agents), where building works of a similar character are carried out.

55. Where, in the opinion of the Building Authority, building works such as cutting and excavation for the purpose of site formation are carried out in contravention of the Buildings Ordinance, or where such works cause or will be likely to cause the collapse of any adjoining or other building, or will render, or will be likely to render, any such building so dangerous that it will collapse, or be likely to collapse, either totally or partially, then the Building Authority may, under Section 23 of the Buildings Ordinance, require that such works cease. But where such building works are carried out not in contravention of this Ordinance or if such works are not likely to cause the collapse of another building or render any such other building dangerous, then the Building Authority does not have any power to intervene. There is obviously a deficiency in the existing Ordinance. We are happy to note that an amendment to the Ordinance, first prepared in January this year, is now being examined in the Legislative Council. The purpose of the proposed amendment is to empower the Building Authority to order a person responsible for the carrying out of building works which are dangerous or potentially dangerous to remedy the situation. If such an order is not complied with the Building Authority is then empowered to cause the necessary work to be carried out and to recover the cost of such work. The power of the Building Authority is therefore enlarged to cover building works which do not contravene the provisions of the Ordinance. The Building Authority may also intervene where no buildings are likely to be endangered by the building works. We consider that this amendment would go a long way towards remedying the present deficiency in the law.

(7) Registered contractors need not be technically qualified, and a statement of particulars countersigned by an authorized architect is adequate for the purpose of registration. The registered contractor keeps all the plans of a construction site, and ensures that the provisions of the Buildings Ordinance are complied with.

CHAPTER III

THE DISASTER AT PO SHAN ROAD

SECTION 1 HISTORY

56. The Mid-levels of Hong Kong Island have been susceptible to earth movement since the area was first extensively developed.

57. On July 18, 1925 a landslide occurred at Po Hing Fong—less than half a mile from the recent Po Shan Road disaster site—destroying houses and causing many deaths.

58. In 1941, and again in 1950, slips occurred along large sections of Bonham Road between Nethersole Hospital and what was then Northcote Training College (9A, Bonham Road).

59. Then, in April 1959, a major landslide occurred at the rear of 92-96, Robinson Road, leading to the temporary closure of several buildings.

60. As a result of the disastrous rainstorms in June 1966, several landslips occurred in the Mid-levels. The two most serious were the landslide from the University of Hong Kong into Lyttelton Road, and that at 41, Conduit Road (I.L. 2479).

SECTION 2 THE REDEVELOPMENT OF INLAND LOT 2260

61. The Linton Investment Co., Ltd., with Mr. Linton CHU as Managing Director, acquired the lease of Inland Lot 2260 (hereinafter referred to as I.L. 2260), 51C and 51D, Conduit Road, on October 1, 1962. It was a property of 30,650 square feet, and consisted of a pair of old-style semi-detached "mansions". Plate 2 is a photograph of the property in 1961.

62. Mr. NG Chun-man was appointed authorized architect in July 1962, before the completion of the transfer of the lease to Linton Investment Co., Ltd. The demolition of the buildings had been completed by November 21, 1962.

63. The first redevelopment plans, prepared by Mr. NG, were approved by the Buildings Ordinance Office, Public Works Department on October 27, 1962. These plans called for the removal of the existing terraces and general lowering of the site by stepped excavation into the hillside from the level of Conduit Road. The sloping faces of the excavation were, according to the plans, at 50° with the horizontal, with terraces or berms at about 25 feet vertical intervals or less. Horizontal surface-drainage channels were incorporated at each berm and along the front and rear edges of each terrace. The site formation work was on record carried out by Foo Wing Building Construction Company and satisfactorily completed on August 6, 1963. These facts have not been seriously contested other than by Mr. S. L. HO.

64. Mr. Dexter MAN became the Managing Director of Linton Investment Co., Ltd. on March 16, 1971, and on November 29, 1963 Mr. S. L. HO was appointed authorized architect for the proposed development works vice Mr. NG Chun-man.

65. Plate 3, which is a photograph of the vicinity of I.L. 2260 taken on May 24, 1970, shows the extent of the cutting of the slope behind I.L. 2260. Berms can be seen extending across the inclined surface which was covered with the remains of chunam plastering. It was a slope which apparently had to be bolstered by a small retaining wall or stone-pitching. The slopes did not show any obvious signs of instability, but did appear to be rather steep in places.

66. The standard practice as stated in a rule-of-thumb requirement in a Circular Letter No. 27 from the Buildings Ordinance Office (see Paragraph 26) is sound and conservative. The site formation work of I.L. 2260 was done in accordance with standard practice in Hong Kong.

67. A modification of the lease terms for I.L. 2260 was granted on November 13, 1962. The terms permitted development to nine storeys with 30% site coverage for private residential purposes. The height of the building was not to exceed +595.00 feet P.D. (i.e. Colony Principal Datum). There was to be one carpark per flat. The premium requested was \$616,000, but was later reduced to \$210,000. The lease modification was, however, not taken up.

68. Following a number of applications a lease modification was granted to Linton Investment Co., Ltd in December 1970, permitting a maximum development of 12 storeys over carparks on a site coverage of 27½%. The premium was then \$367,800.

69. Building plans for this project, submitted by Mr. S. L. Ho, were approved on December 4, 1970, and revised site formation plans were approved on January 5, 1971. The consent to commence work was given on February 9, 1971. The Deed of Variation was registered on March 22, 1971.

70. As a result of modifying the lease terms the developer was given an increase of 36 flats—all of which were to have carparks—while the height of the development was still not to exceed the P.D. level of +595.00. In the circumstances, the developer and his authorized architect decided to cut into the site to obtain additional ground floor space for carparks.

71. The revised site formation plans showed an “existing 80½° rock-cutting slope below Po Shan Road”. They also showed a similar cutting, 30 to 40 feet high, which was proposed to be constructed below the “existing” slope in connection with a general reduction in level of the site.

72. The evidence of the Public Works Department was that Mr. S. L. HO’s statement of “existing 80½° of rock” was accepted and the plans were “dealt with on a temporary loose-minute file, the original files being in action elsewhere and which remained untraced until recently”.

73. Evidence submitted to us by Mr. S. L. HO indicated that from the time of his appointment in November 1963 up to May 1971 no work had been done except boring tests on the site by Zenith Engineering Co., Ltd. in July 1970. However, he did admit under cross-examination that some minor repair work—“trimming”—had been undertaken on the slope following the heavy rains in 1966 by casual workers engaged by the owners, Linton Investment Co., Ltd. Throughout his evidence Mr. HO maintained that the “existing” slope was partially rock, at worst rock and earth, and argued that the 80½° angle of slope was a result of erosion. This was refuted by Mr. Vail’s expert evidence, which we accept.

74. Site formation work commenced on I.L. 2260 in early May 1971 by Tai Shun Construction Company who had been engaged by the owners for this purpose. The contractors ceased work on May 21, 1971, having written to the owners on that same date saying,

“We are considering that is dangerous to work on this cutting slope, at 80 degrees, of decomposed rocks at it may cause damages (*sic*) to the road above the site. Under the circumstances, we are compelled to slow down the work.”

The contractors had virtually withdrawn from the site by June 1, 1971.

75. The residents in the Po Shan Road area were, in fact, becoming more and more apprehensive of the continual encroachment into the hillside at the southern end of I.L. 2260. There were a number of minor slips in that slope during the first seven or eight months in 1971, and mud was washed from the site on to Conduit Road during periods of heavy rain.

76. On August 18, 1971 officers of the Buildings Ordinance Office noticed a rather extensive slip in the cutting at the southern end of I.L. 2260 during a general inspection after Typhoon *Rose*. It was then discovered that the cutting was not of rock composition, and the Buildings Ordinance Office was very concerned about this matter. As a result of the slip, the chunam which had been applied to the surface of the cutting a few months previously fell off *en masse*. Chunam was soon applied to the cutting again, but it also fell off in the following month. Construction work at the site then appeared to be suspended for about five to six months.

77. Meanwhile, in a letter to the Building Authority dated August 27, 1971 Mr. S. L. Ho maintained that the slope shown on drawings which he submitted to the Buildings Ordinance Office represented the situation when he first took over as authorized architect. Mr. HO’s statement was accepted by the Buildings Ordinance Office since the original file showing the drawings of Mr. NG Chun-man, the former architect, was not available.

78. Mr. S. L. HO then proposed temporary remedial measures such as cementing the slope and drainage channels, and he also proposed to submit plans for a retaining wall. The pressure from the Buildings Ordinance Office and even from the tenants and owners of nearby property was building up.

79. On November 15, 1971 the Building Authority wrote to Mr. HO asking him about the progress of work on the site. The letter, although dated November 15, 1971 was marked “Forwarded 17th November”—a delay of two days.

80. Meanwhile on November 16, 1971 Mr. HO withdrew from the project, and Mr. D. C. SHUM was appointed authorized architect in his place.

81. On November 20, 1971, four days after his appointment, Mr. SHUM submitted new site formation plans, and asked for their early approval as “the present slope at the moment is in a very critical condition”.

82. Events then occurred in rapid succession:—

- (1) On November 25, 1971 the Buildings Ordinance Office held a site inspection and a meeting.
- (2) On November 27, 1971 the Highways Office expressed concern about the situation at I.L. 2260.
- (3) On November 29, 1971 Mr. SHUM's proposals were discussed. The Director of Public Works received an anonymous letter forecasting disaster at I.L. 2260.
- (4) On December 2, 1971 Mr. SHUM amended his plans following a site meeting with officers of the Buildings Ordinance Office.
- (5) On December 16, 1971 there was another anonymous letter to the Director of Public Works with dire predictions.
- (6) The Buildings Ordinance Office noticed that on February 21, 1972 there was still no progress at I.L. 2260.
- (7) On February 24, 1972 a programme of work was agreed. Amended plans were prepared and these were approved on March 21, 1972.

83. In September 1971 "haircracks" appeared in Po Shan Road opposite No. 21. There was also earth movement in the vicinity of No. 21.

84. In November 1971, the face of the excavation in I.L. 2260 appeared wet and water was seen emerging at formation level.

85. In December 1971, Mr. Li Fook-shu, the owner and occupier of 21, Po Shan Road, noticed that because of the excavation at I.L. 2260 that part of the slope beneath his garage had become steeper. There were now a few cracks on the wall of his garage. Mr. Li's engineering advisers wrote to the authorized architects of the construction site in January 1972 about the matter, but received no reply. In that same month officers from the Public Works Department inspected Mr. Li's premises, and found that the earth under his garden terrace was settling and that there were defective pipes choking the drainage. Repairs to the pipes were subsequently made to the satisfaction of the Public Works Department. There was also "clear evidence" of movement in the slope between the premises and Skyline Mansion (51A and 51B, Conduit Road).

86. Plate 4 is an aerial view of the Mid-levels in March 1972. In that month, the driving of steel sheet piles commenced at I.L. 2260. There was also excavation for the removal of obstructions. By the end of March some 75% of the steel sheet piles had been driven along the eastern half of the base of the slope at the southern face of the site (see Plates 5 and 6).

87. In April 1972 trench excavation for a retaining wall construction began, and by the end of that month a roof made of metal sheeting supported by a bamboo framework had been erected over the whole of the slope. Steel sheet piling and excavation at the site continued throughout May and the first half of June 1972.

88. From April 1972 up to the occurrence of the disaster there were several landslips at another construction site at 8, Po Shan Road, some of which blocked Po Shan Road temporarily. A major slip occurred at that location on May 10, 1972.

89. In April or May 1972, earth was washed down by rain from Po Shan Road into the western end of I.L. 2260.

90. About three weeks before the disaster cracks appeared in Po Shan Road.

91. A few days prior to the disaster heavy rain brought mud and debris on to Conduit Road, particularly that part of the road surface outside I.L. 2260.

92. Figure 3 shows approximate cross sections through the middle of I.L. 2260 to illustrate the extent of the cuttings at various stages of redevelopment and formation of this site.

SECTION 3

EVENTS ON JUNE 16, 1972

93. The heavy rains which commenced on June 15, 1972 continued on June 16. A landslip occurred at about 8.40 a.m. at the construction site at 8, Po Shan Road, and the road was completely blocked by mud, debris and collapsed scaffolding. The affected section of the road was cordoned off while the obstruction was being cleared. Danger signs were put up by the Police, and police officers were posted to warn motorists and pedestrians of the danger.

94. At about 9 a.m. on that day it was still raining heavily, and a large quantity of earth slid from the hill above Po Shan Road, so much so that about four feet of mud was accumulated on the road outside Po Shan Mansions (10-16, Po Shan Road). There was, however, no slip yet at I.L. 2260.

95. At about 10 a.m. a minor slip occurred on the hillside east of Po Shan Mansions and some earth fell on to Po Shan Road.

96. Meanwhile cracks had developed in the middle of the roadway between 8, Po Shan Road and the garage of 21, Po Shan Road. The Public Works Department was unable to seal these cracks.

97. I.L. 2260 was inspected by members of the Public Works Department in the evening and it was found that the blinding layer to the retaining wall foundation had been laid, and no movement of the steel piling was noticed.

SECTION 4

EVENTS ON JUNE 17, 1972

98. It rained heavily on June 17, 1972. I.L. 2260 was again inspected at 8.30 a.m. and it was found that there was no work on the site because of the rain, and that the steel sheet piling was still in order.

99. At about 10 a.m., however, an emergency call was received by the Buildings Ordinance Office that a slip had occurred. At 10.30 a.m. officers of that Office inspected the area in question and found that a slip had occurred over the whole width of the cut slope at the southern face of I.L. 2260, carrying away nearly all the bamboo framing and metal sheet covering. The steel sheet piling tilted northwards and distorted sideways. Half the width of Po Shan Road and the garage and adjoining garden terrace of 21, Po Shan Road had settled some six feet.

100. The residents of 21, Po Shan Road were advised by officers of the Public Works Department to leave the house, which they did, and the section of Po Shan Road above the slip area was cordoned off. Meanwhile, a slip from the south side of Po Shan Road above I.L. 2260 had also occurred and was seen to enlarge.

101. At about 12.45 p.m. officers of the Highways Office noticed signs of break-up in the pitched slope along the access road to Mirror Marina (47, Conduit Road) behind Skyline Mansion (51A & 51B, Conduit Road).

102. At 2 p.m. the Director of Public Works visited the Po Shan Road area with several senior officers of his Department. They noticed that the garage and garden terrace of 21, Po Shan Road appeared to be settling further, and these structures together with the adjoining half-width of Po Shan Road were some 10 to 15 feet below normal level. A minor landslip had occurred on the south side of Po Shan Road to the west of the garage. There were signs of disintegration and damage in the slope below 21, Po Shan Road. Slight cracks occurred in the access road behind Skyline Mansion, and by about midday this access road had been almost completely blocked by earth and rubble fallen from the slope above. There was evidence of movement in the pitched slope along the access road. Nevertheless, the retaining wall behind Skyline Mansion was still intact at the lower level.

103. At that stage it seemed likely that further slipping of the slope below the house of 21, Po Shan Road would occur. On the instruction of the Public Works Department the Police warned the ground floor tenants of the rear block of Skyline Mansion to keep away from rear walls and windows and to prepare for evacuation at short notice. The Highways Office then arranged to build a sandbag wall at the rear of Skyline Mansion to absorb the shock of the expected slip from below 21, Po Shan Road.

104. Meanwhile, in the afternoon there were several small falls of earth at I.L. 2260, and the steel piling there had buckled severely. The piling continued to deflect and distort. By that time the metal sheet covering erected over the slope on the southern end of the site had been largely dislodged. At this stage, all the signs pointed to a possible landslip of a limited nature below 21, Po Shan Road, which might just reach Skyline Mansion and cause further subsidence of the garage and garden terrace.

105. Although there was no water visible on the slip face at I.L. 2260, a considerable amount of water appeared to seep through the southeast corner of the site and the retaining wall behind Skyline Mansion. In particular, a large quantity of storm-water flowed down from the hillside above Po Shan Road along culverts, one of which ran diagonally below the house at 21, Po Shan Road. In the late afternoon, the Highways Office diverted the drainage and sealed the six inch-diameter sewer which discharged on to the face of the slip. The fresh and salt water supplies for Po Shan Road, Conduit Road (western end) and Kotewall Road were cut off at 4 p.m.

106. In the early evening it was found that the half-width of Po Shan Road adjoining the garage and garden terrace had settled further. At about 8 p.m. lights were set up by the Public Works Department to illuminate the slip area.

DIAGRAM OF CROSS SECTIONS TAKEN THROUGH THE MIDDLE OF I.L. 2260 (51C & 51D CONDUIT ROAD) TO ILLUSTRATE THE EXTENT OF THE CUTTINGS AT THE VARIOUS STAGES OF THE DEVELOPMENT AND FORMATION OF THIS SITE. ALL SECTIONS ARE APPROXIMATE.

17

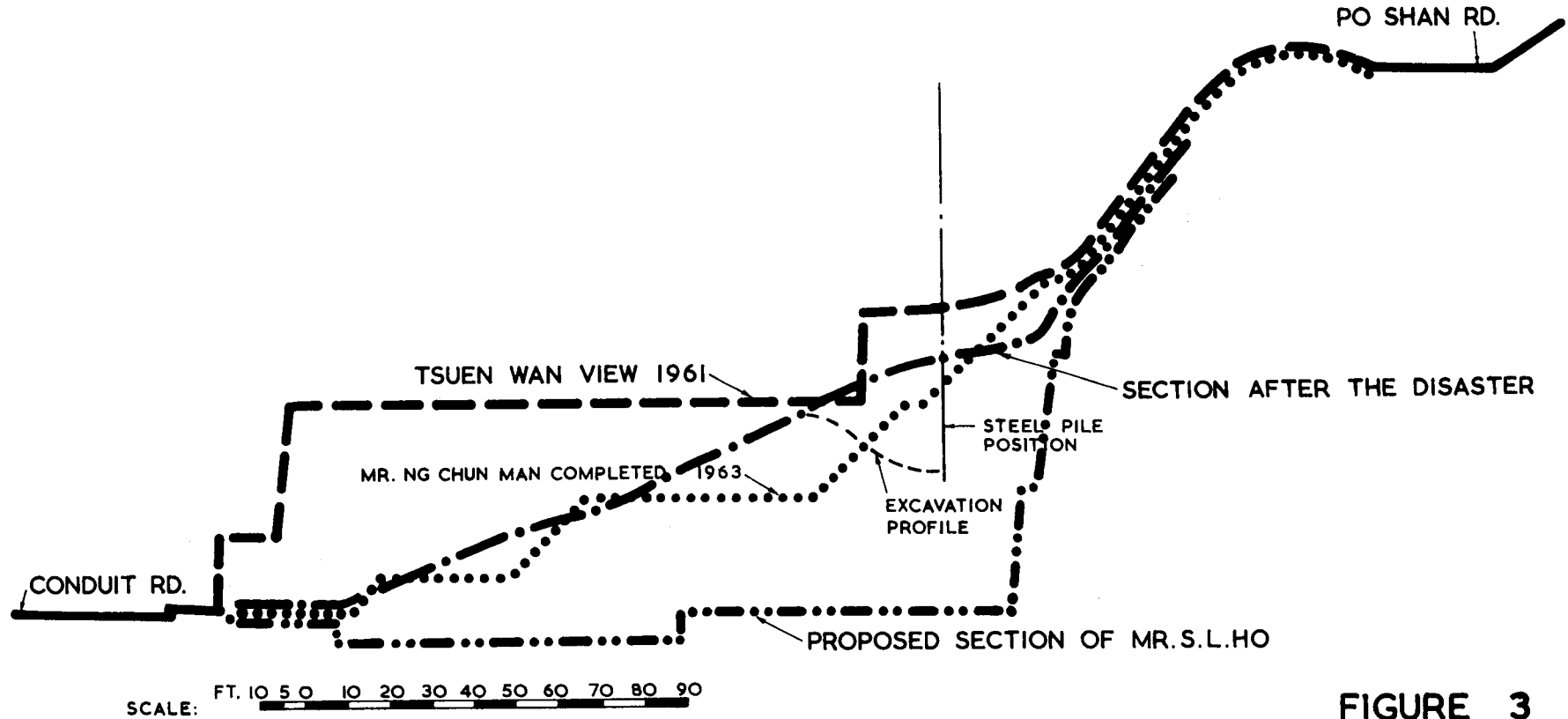


FIGURE 3

SECTION 5

EVENTS BEFORE 5 P.M. ON JUNE 18, 1972

107. There was very heavy rain on June 18, 1972, especially in the morning. By about 9 a.m. the access road behind Skyline Mansion had been completely blocked by mud, rocks and vegetation. The construction of the proposed sandbag wall had not progressed very far and since a landslip was likely to occur the work was stopped. The whole of the slope showed a tendency to creep, and the settlement of the half-width of Po Shan Road as well as the garage and garden terrace continued. Very heavy rain began to fall at 11.30 a.m.

108. In the course of the morning the cracks in Po Shan Road widened considerably. The garage of 21, Po Shan Road sank a little further and moved northwards, and there were also cracks in the garden terrace.

109. Meanwhile, mud and vegetation continued to fall from the slope below the house at 21, Po Shan Road on to the rear and ground floor carpark of Skyline Mansion. At 11 a.m. the mud in Conduit Road was about six inches deep. The main slip face continued to give indications of movement, and by mid-afternoon the steel sheet piling at I.L. 2260 was almost entirely covered with mud and Conduit Road was completely blocked. The road was cordoned off at some time between 4 and 5 p.m.

110. By early afternoon the retaining wall below 21, Po Shan Road had moved and fractured. The filling behind the retaining wall and the paving had settled fairly extensively. Nevertheless, apart from minor cracks the house itself appeared to be intact. The slope above Mirror Marina was also showing signs of strain. The main slip face continued to give indications of movement. Settlement continued until at one stage the half-width of Po Shan Road was some 20 feet below normal level. The condition of the garage and terrace deteriorated steadily throughout the afternoon. The garage still appeared intact but settling, tilting towards the garden terrace. The terrace was distorted and bowed from end to end, and the supporting beams and columns were fractured. One of the eye-witnesses also noticed a large hole in the garden terrace. The two structures were apparently on the point of imminent collapse and were expected to slip towards the direction of Skyline Mansion (see Plate 8).

111. Some time before 5 p.m. officers of the Buildings Ordinance Office decided that the rear flats of Skyline Mansion should be evacuated, and accordingly made arrangements with the Police towards that end. Some of the residents of the front portion who spoke to the officers were similarly advised. About 30 residents were subsequently evacuated from the 24 flats of the rear block of the building. Other residents had already left probably of their own accord. None of the evacuees requested accommodation from Government.

SECTION 6

THE LANDSLIP AT 5 P.M. ON JUNE 18, 1972

112. At about 5.10 p.m. a huge mass of earth, rocks and vegetation broke loose from the west side of I.L. 2260 and tumbled down "at a terrific speed" across Conduit Road. It broke the retaining wall behind 11, Kotewall Road, a four-storied residence situated between Conduit Road and Kotewall Road, and partially buried that house up to the level of the second floor. Eye-witnesses spoke of a thunderous noise as the slip occurred.

113. The residents of 11, Kotewall Road, Dr. Clifford K. K. SUN and his family, managed to escape from the partially buried house. There was fortunately no casualty from this landslip. As a result of the slip Conduit Road was covered with earth to a depth of about six feet. Plate 9 shows the disaster area after the slip. At that time, Dr. SUN's house was still structurally sound, and Mr. G. F. HOGG, Senior Building Surveyor, was of the view that Dr. SUN and his family would be able to return to their house the following day, as there was still no indication at this stage that any further slipping would endanger Dr. SUN's house.

114. The anxiety of the Public Works Department and the people in the area was mainly focused on the continuing settlement and possible collapse of the garage and garden terrace of 21, Po Shan Road on to Skyline Mansion. Mr. J. G. STEAN, Acting Principal Government Building Surveyor, made the following comments on the possibility of a major landslip in the evening of June 18, 1972:—

"The evidence of recent slides at No. 8, Po Shan Road seemed to indicate that shallow wash-outs were likely. Nothing in my experience, in this area and elsewhere would have led me to consider as a possibility the magnitude of the slide which took place later that evening nor the possibility that a slide could move so far with such devastating effect. No suggestion that such an event might happen was made to me by any other officer during my visits to the area."

115. At about 7.30 p.m. the slip area was again illuminated by the Public Works Department. Buildings in the area with the exception of Kotewall Court had no electricity at that time. In fact, some of the residents in the vicinity had left their premises because of the power failure.

116. From about 8 p.m. up to the occurrence of the major landslip shortly before 9 p.m. earth and rocks continued to fall in the slip area.

SECTION 7 THE MAJOR LANDSLIP ON JUNE 18, 1972

117. The evidence indicates that the major landslip took place between 8.50 and 8.55 p.m. According to the evidence of eye-witnesses, this slip appeared to have started from the hillside on the south side of Po Shan Road just above I.L. 2260, crossed the road and hit the garage of 21, Po Shan Road. On being hit the garage broke away from the garden terrace, slid down for a short distance and then toppled over in the direction of the slip. After hitting the garage the slip gathered momentum, swept past the west side of Skyline Mansion, crossed Conduit Road and then completely engulfed and obliterated 11, Kotewall Road—the house which had already been partially buried by the earlier landslip at about 5 p.m. (see paragraph 112). After engulfing 11, Kotewall Road, the slip continued on its path across Kotewall Road and struck Kotewall Court (38–40, Kotewall Road). According to the evidence the landslip itself took only about seven to ten seconds.

118. Kotewall Court—then the only well-lit building in the area—appeared to shudder and come away from its foundation on being struck by the slip, and it moved forward in the direction of the harbour. It then toppled and broke up transversely near the middle, “like a man kneeling, then falling forward”. It struck and damaged a portion of the upper storeys of a new block of unoccupied flats in the vicinity (Section H, Block IV of Greenview Gardens, 125, Robinson Road), and then crumbled and disintegrated into rubble. Part of the demolished building fell into the construction site I.L. 8171 at 12, Babington Path. The lights went out as the building collapsed in a cloud of dust. The whole incident took seconds only.

119. One of the eye-witnesses, Mr. David J. ROADS, described the landslip and house collapse in the following terms:—

“... At about 20.20 I heard some stones rolling down the hillside from Po Shan Road toward Conduit Road, which were striking some steel stanchions protecting a large crane on Conduit Road. This continued until about 20.45. At about 20.50 I heard a fairly large stone fall down and hit the stanchions. I went to my verandah to see what had happened. I saw about 30 persons standing on Conduit Road, including several children looking up at the hillside where the stones were falling from. Suddenly without warning, the hillside above Po Shan Road gave way and tons of dirt, mud and stones moved very rapidly toward Conduit Road and then on down to Kotewall Road. It struck a small garage and then moved on down to a large apartment house on Kotewall Road. When it hit this building Kotewall Court, the building appeared to move or come away from its foundations, and as it did this it remained upright and moved forward. It began to crumble in the mid-section and as this happened the building began to topple and struck the other block of new buildings adjacent to Kotewall Court. There were candles in various windows of Kotewall Court and there were lights on the crane on Conduit Road. When the building began to crumble all the lights went out. I saw furniture falling from the building and particularly noticed a bed in which people were in and they were thrown out. I went to my telephone and called 999 and told the girl that there was a disaster at Kotewall and Conduit Road junctions and that a large building with many persons in it had collapsed, due to a landslide. I went back to my verandah and heard cries from people trapped in the rubble . . .”

120. The landslip also demolished a hut adjacent to the construction site I.L. 8171, 12, Babington Path and killed a woman therein.

121. The slip area measured some 900 feet from north to south and some 200 feet from east to west. It was estimated that the weight of earth and rock in the slip was some 50,000 tons.

122. Extracts from some of the accounts of personal experiences are at Appendix VII.

123. In total 67 persons were killed, and, according to reports received, 20 injured. Appendix VIII is a list of the persons killed.

124. Plates 10 and 11, which were taken from the same angle, show the disaster area respectively before and after the major landslip. An aerial view of the disaster area is at Plate 7. Appendix IX is a plan of the disaster area showing the approximate limit of the major landslip (including debris) on June 22, 1972.

SECTION 8 RESCUE WORK

(A) GENERAL INFORMATION

125. The facts stated in paragraphs 23, 24, 26 and 27 of our Interim Report are applicable under this heading, except that the Police District Headquarters concerned in the present case is the Hong Kong Island District Headquarters.

(B) RESCUE WORK ON THE DISASTER SITE

(a) The first hour after the disaster

126. At about 8.55 p.m. on June 18, 1972, the first of over 30 emergency calls of a landslip and building collapses in the area between Po Shan Road and Babington Path were received by the Police at the Radio Control Centre of the Hong Kong Island District Headquarters. (Appendix X is the general information on emergency calls). The calls gave different locations. The first four of those calls gave the following addresses: (1) 19, Conduit Road, (2) 19, Babington Path, (3) Kotewall Court and (4) 14, Kotewall Road (which according to Police records was reported by Mr. David J. ROADS—see paragraph 119 above). Simultaneously, with the receipt of these first calls, three Police vehicles were despatched. Emergency Unit Car 1 was sent to 14, Kotewall Road, arriving at 9.04 p.m. Emergency Unit Car 3 was sent to 19, Babington Path, arriving at 9.06 p.m. Central Police Station patrol car 19 was sent to Conduit Road, but there is no evidence as to the time of its arrival. Residents in the area agreed in their evidence that the Police arrived within minutes of the collapse of Kotewall Court.

127. By 8.57 p.m. the Assistant Commissioner of Police (Hong Kong Island), the Divisional Superintendent (Central), the Divisional Superintendent (Western), and the Hong Kong Island Police/Military Control Centre (the co-ordinating and operational centre for the Police and the Army in emergencies) had been informed. The Chief Superintendent of Hong Kong Island was informed at 9 p.m.

128. Shortly after 9 p.m. the Chief Inspector in charge of the Emergency Unit, Hong Kong Island, gave instructions for all available personnel in the Unit to prepare for immediate despatch to the scene of the disaster. He also arranged for all emergency equipment held by the Unit to be loaded on to a police lorry in readiness for conveyance to the scene. Such equipment consisted of nine Tilley pressure lamps and one Tilley lamp search-light (powered by kerosene and pressure operated), a Mitralux search-light (powered by a petrol engine generator), two or three dozen flashlights and some big-beam flashlights, blankets, stretchers, first aid boxes, an emergency generator, ropes and such handtools as shovels and pickaxes.

129. The Fire Services Department was informed by the Hong Kong Island Radio Control Centre at 8.58 p.m. of a house collapse at the rear of 17, Babington Path. Accordingly four vehicles under the command of the Rescue Officer 'H' Western responded. These were a light rescue unit, a rescue escape, an escape tender and an ambulance. They arrived at 9.12 p.m.

130. At 9.12 p.m. another report was received by the Fire Services Department from the Hong Kong Island Radio Control Centre of a house collapse at 21, Po Shan Road. A light rescue unit, a rescue escape, and an ambulance under the command of the Rescue Officer 'H' Central were immediately sent. The Senior Divisional Officer (Hong Kong) was informed at the same time and arrived at 9.15 p.m. at the top of the wreckage at Kotewall Road together with the party led by the Rescue Officer 'H' Central.

131. At about this time there were about 10 to 15 Emergency Unit vehicles and at least about 30 fire officers with their fire appliances at Kotewall Road.

132. The Buildings Ordinance Office was informed by the Police at 9.04 p.m., the Social Welfare Department at 10.05 p.m., and the Hongkong Electric Co., Ltd. at 10.22 p.m. The City District Office (Western) was also informed.

133. After being notified of the disaster, officers of the Buildings Ordinance Office were present at the scene on a 24-hour basis to advise the Fire Services on structural problems generally and to assist in other ways as far as possible. They also inspected the two buildings behind Kotewall Court, viz., Blocks I and II, Emerald Gardens, and advised that both buildings be evacuated completely. They also inspected Block IV of Greenview Gardens and found that there was no immediate danger of even a partial collapse of that building. Buildings at Po Shan Road were also inspected. All these measures were adopted shortly after the collapse of Kotewall Court.

134. According to the evidence of a police inspector there was confusion in the beginning because of darkness and heavy rain and also because the extent of the disaster could not be ascertained at the time. Indeed, a police superintendent remarked that in the initial stages, as the area affected was so vast and the persons there were so shaken with the enormosity of the disaster, the situation appeared to be chaotic. According to him by 10.30 to 11 p.m. the situation had been "very much sorted out".

135. Owing to the different locations given by the emergency calls, police cars were sent to various destinations, and from the boundaries of the scene of the disaster it was difficult for the police officers there at first to appreciate precisely the extent of the collapse. When the first party of fire officers arrived at 9.12 p.m. they also had difficulty in locating and reaching the actual site of the building collapse, and therefore had to make enquiries from bystanders and police officers and search for the site on foot.

136. The lighting in the area at 9.20 p.m. was poor, but each fire and police officer was equipped either with a gas-tight hand-torch or big-beam flashlight with which to beam into cavities in search of persons trapped therein.

137. At this time "a wave of mud and water", and stones and debris came rushing down Kotewall Road with a tremendous noise, covering the whole of the road to a depth of about six inches. On the advice of the Fire Services, police and fire officers were temporarily withdrawn to a safer location in Robinson Road.

138. By 9.24 p.m., the Senior Divisional Officer (Hong Kong) of the Fire Services had ascertained that the landslip had totally demolished a fully occupied building, viz., Kotewall Court. He accordingly informed the Fire Services Department's Radio Control Centre of the fact and requested assistance. A major special service call was made accordingly. The call was upgraded to a disaster alarm a little later.

139. At 9.26 p.m. the Emergency Unit Car 1 referred to in paragraph 126 above reported to the Police Radio Control Centre that Kotewall Court had collapsed. This was the first information the Police received of the collapse from a police officer on site.

140. The first two victims were rescued at 9.24 p.m.

141. A strong smell of gas over the whole area was noticed at about 9.30 p.m., and the rescue workers were instructed not to use naked lights nor to smoke.

142. At the same time a large volume of water was flowing over an old retaining wall between Conduit Road and Kotewall Road. This hindered rescue operations.

143. At 9.40 p.m., rescue workers located four persons trapped in that section of the wreckage below Kotewall Road. All of them were extricated and taken to hospital between 10 and 10.40 p.m. The area was combed by rescue workers by means of hand-torches, in accordance with the normal practice in emergencies of this kind. Parties of fire officers spread out over the whole area of the wreckage, searching for survivors and carrying out rescue work. According to routine practice, rescue workers were ordered in turn to shout, keep silent and listen for calls from trapped survivors. It was understood by all taking part in the search and rescue that these calls might be very weak.

144. In accordance with the normal practice in rescue work of this type, the tools used by fire officers in the initial stages were mainly handtools such as crowbars, bolt croppers and axes, and sometimes they used their bare hands. Requests for more men, ambulances and a medical team were made and instructions as to the most convenient route to the scene of disaster (i.e., through Greenview Gardens, Robinson Road) were given by the fire officers on the spot.

145. At 9.49 p.m. Queen Mary Hospital was warned by the Police Radio Control Centre to standby as many casualties were expected. A medical team was sent by the Hospital to the scene of the disaster. Police parties were sent to the Hospital and the Public Mortuary for identification of casualties. A Missing Persons Bureau was also set up by the Police.

146. There was no lighting at the Kotewall Road level of the wreckage at the time as the street-lighting had failed. The heavy lighting equipment available consisted of a generator and a light connected by a cable only about 30 feet long. The senior fire officer considered that the presence of gas in the area necessitated placing the generator within the danger zone of gas explosion, and it would therefore be unsafe to use this equipment. There was also a shortage of heavy lighting equipment owing to the fact that the main lighting unit of the Hong Kong Command of the Fire Services Department was on loan in Kowloon for the Sau Mau Ping disaster. Most of the Army lighting equipment was similarly engaged.

147. The site of Kotewall Court and the adjoining portion of Kotewall Road was "a mountain of mud". Water was not only flowing down from Conduit Road into Kotewall Road. There was also water gushing from both upper and lower portions of the wreckage. Kotewall Road had thus "turned itself into river of mud!"

148. The Assistant Chief Fire Officer (Hong Kong) arrived at Kotewall Road at about 9.50 p.m. and assumed command of the whole operation. He was briefed on the general situation as far as it was known at the time. He then surveyed the area. He noticed that the debris across Kotewall Road was about 20 to 25 feet deep. By means of a rope, he descended about 100 feet to the lower level of the wreckage and directed operations there, leaving the Senior Divisional Officer (Hong Kong) in charge at the Kotewall Road level. His descent was made very difficult by the movement of wet and loose earth which trapped his feet.

149. At 9.56 p.m. orders were issued to all off-duty personnel of the Hong Kong Island and Marine Fire Command to be re-called to standby duty at their respective stations.

150. As the approach roads were made impassable by mud, debris, and water, fire appliances were not able to reach the wreckage until shortly before 10 p.m.

151. The general picture of the scene at about this time was described by Superintendent M. A. TURNER of Western Police Station in these words:—

“There were many fire appliances, firemen, policemen and civilians in the vicinity and it was raining heavily and a great deal of surplus water was flowing down the hillside on to Kotewall Road

“There was a very strong smell of gas in the area and there was a lot of crying and shouting probably from persons trapped in the rubble as well as from various bystanders. I spoke to Mr. JACKSON—Acting Assistant Chief Fire Officer—who was directing operations from this point and was the fire officer in charge. He told me that he estimated that at least two hundred people were trapped in the wreckage and that rescue operations were in progress. He went on to say special equipment had been called for and that the services had been requested to assist. He asked me to ensure that all persons not directly involved in the rescue should be kept clear of the area as it was extremely dangerous and they would as well impede the rescue by trained workers. He also asked me to check all four blocks in Emerald Court (*sic*) to ensure no persons were still inside as this building was considered unsafe.

“I checked the site of rescue operations for outsiders with the assistance of Police Tactical Unit and found none and then checked 36, Kotewall Road and brought out one Chinese female and four children who were the only apparent persons remaining in the building.”

152. Before leaving this part of the rescue operations, we consider that the rescue work performed by two persons warrant special recognition. One is Mr. Terrence A. BERRELOTH, an engineer, who arrived at the disaster site of his own accord about 25 minutes after the collapse of Kotewall Court and offered his services. His evidence is reproduced in full in Appendix XI. The second person is Senior Inspector Guy Sanderson SHIRRA, attached to Fanling Magistracy, who was on leave and at home at the time of the landslide. He arrived at the disaster site at about 9.25 p.m. and offered his services. His evidence is reproduced in full in Appendix XII.

(b) From about 10 p.m. until midnight

153. At about 10 p.m. there were some 60 cars parked in Kotewall Road and Robinson Road, causing an obstruction to those vehicles which had to reach the disaster site. Accordingly, the Police made an appeal by loudspeaker, as a result of which some 30 vehicles were removed by their owners. Those remaining were towed away by the Police. Though the area was not cleared of all non-essential vehicles until about 1 a.m., it had already been effectively cordoned off by the Police earlier at 11.10 p.m.

154. At 10.03 p.m., at the request of the Fire Services Department, the Police asked for assistance from the Civil Aid Services and the Army. The Civil Aid Services took part in search and rescue operations from 10.30 p.m. until 4 a.m. the following day, and remained on standby duty on the 19th and 20th.

155. A platoon from the Police Tactical Unit arrived at 10.05 p.m. and a Police Command Post was set up at Kotewall Road at 10.07 p.m.

156. Between 10.05 and 10.10 p.m. the Assistant Chief Fire Officer (Hong Kong) contacted the Fire Services Department Radio Control and again asked for the assistance of Civil Aid Services. Heavy earth-moving equipment and floodlights were also requested. He then gave instructions for portable floodlights to be taken from fire appliances at the scene to be used at the Kotewall Road level of the wreckage.

157. At 10.15 p.m. the Chief Fire Officer (Hong Kong) arrived at the scene and assumed command of the situation. He and the Senior Divisional Officer (Hong Kong) remained at the Kotewall Road level, whilst the Assistant Chief Fire Officer (Hong Kong) was sent to the Babington Path area to take charge of search and rescue operations.

158. A strong smell of gas which appeared to represent dangerous concentrations over the whole area of the wreckage was still evident at this time. Strict precautions were therefore maintained in respect of naked lights. Warnings were issued to all rescue workers against the use of electrical and mechanical equipment, particularly petrol-driven generators, Tilley lamps and propane cutters, lest the sparks or flames produced therefrom might cause a gas explosion. The situation was complicated by the presence of butane gas as well as town gas, which were not readily distinguishable one from the other. As town gas is lighter than air and butane gas is heavier than air, that there might have been both types of gas trapped within the cavities of the wreckage was a very real possibility. Requests were accordingly made by the Police and the Fire Services at about 10.15 p.m. for the attendance of the staff of the Hong Kong and China Gas Co., Ltd. The emergency standby party of the Company arrived at about 10.40 p.m. The Distribution Engineer of the Company arrived shortly before 11 p.m. The standby party reported to a police inspector at the disaster site, but the fire officers in charge of rescue operations were not informed of their arrival, nor did they make any attempt to locate the standby party. Our conclusion on this aspect of the rescue is contained in Chapter VI.

159. Shortly after 10.15 p.m. the Acting Colonial Secretary and the Director of Fire Services arrived at the scene from the disaster site at Sau Mau Ping. The Acting Deputy Director of Fire Services arrived at about 10.30 p.m.

160. During this time, there was intermittent rain, and water was running down the west side of the slip.

161. By 10.30 p.m. an emergency tender from the Fire Services Department was already in position near the Kotewall Road level of the wreckage, and the generator on the appliance was used to provide lighting at this location. There was another emergency tender at the Babington Path level. Access to the bottom of the wreckage was only possible through the ground floor of Block IV, Greenview Gardens, where the headroom was limited to seven feet six inches. For this reason the appliance could not get within about 500 feet of the bottom of the wreckage. Also, the road leading there was rendered impassable because of heavy rain and roadworks.

162. Generators were now supplied by the Public Works Departments, in addition to the lighting equipment provided by the Police Emergency Unit.

163. Whilst the Kotewall Road level was well-lit at this time the wreckage itself was not. Search and rescue workers were still relying mainly on hand-torches or big-beam flashlights as it was considered that the danger of gas explosion was still very real. For the same reason, oxy-acetylene cutting equipment and petrol-driven saws were not used.

164. It was not as yet possible at this stage to use large and heavy earth-moving equipment as the ground was still soft and slippery and responsive even to slight vibrations. The whole wreckage was liable to slip and the hazard was aggravated by the many loose articles such as heavy furniture inside the wreckage. In the opinion of the Senior Divisional Officer (Hong Kong) large and heavy machinery would have been dangerous because rescue work in the prevailing circumstances required slow and careful digging by hand and with small equipment. It was unsafe to lift portions of the collapsed structure as it might cause the other parts of the wreckage to move. Consequently, the only practical and safe way of extracting trapped persons was to burrow laboriously into the wreckage.

165. In the words of the Acting Chief Fire Officer (Hong Kong):—

“First of all the slip on Kotewall Road, some thousands of tons had to be cleared in order to make a working platform, low enough for the working cranes to get into position. The cranes were then mounted on a slab which was all the time subsiding; it was giving a little but firm enough to work on. The whole building, and it comprised not less than 2,000 tons, was still held together in one integral mass and after the initial rescue operations had been concluded and we were trying to get into the building further, it was a case of having to cut it up into little pieces which we could manage with the cranes or with a mechanical shovel and cut it literally apart piece by piece. It was still fastened together as one integral building even though it had collapsed. The equipment at first was controlled by the 7'6" headroom and afterwards the contractors brought in a portable crane in collapsible sections which he constructed on the site and which takes a long time to do this sort of thing. And even then this crane's lifting capacity could have been no more than one ton.”

166. The Acting Deputy Director of Fire Services also felt it would be wrong to disturb the debris and that heavy work should not commence until all the known casualties were extricated.

167. Army personnel arrived at about 11.25 p.m. and were placed under the direction of the Fire Services Department. They stayed until 6 p.m. of June 23. There were about 100 men on the site each day, with half of the number working and the other half on standby at any one period. Equipment was provided by the Army at dawn on the following day and this included earth-moving plant and oxy-acetylene cutting equipment. The Army units which rendered assistance were the Royal Engineers, the Gurkha Field Squadron, the Irish Guards and the Royal Army Medical Corps.

(c) From midnight to dawn on June 19, 1972

168. Owing to the difficulties described above, it was not until after midnight that the whole disaster site was fully illuminated. The Fire Services considered that the danger of gas explosion had by this time diminished. The Mitralux searchlight and generator supplied by the Police Emergency Unit were set up on the third floor of Block IV, Greenview Gardens, 50 to 60 feet away from the bottom of the wreckage. The loud noise emanating from the working generator at that distance was not considered loud enough to drown any possible cries for help. The Fire Services Department was also informed that certain commercial contractors were prepared to supply lighting equipment, and arrangements were being made to convey the equipment to the scene.

169. By this time (i.e., shortly after midnight) the rescue workers had completely explored the debris, calling, tapping and listening, but heard no one.

170. It was decided by the fire officers that though the danger of gas explosion had diminished by this time the presence of residual gas still prevented oxy-acetylene cutting.

171. At about 12.40 p.m., thorough searches for survivors continued. In the meantime, additional power and lighting equipment and a further 50 Army personnel arrived at the Kotewall Road level of the wreckage. Members of the Auxiliary Medical Service also arrived at this time. Workers were again warned to exercise extreme care because of falling debris and the instability of the wreckage.

172. At 1.19 a.m. representatives of the Royal Engineers arrived and made arrangements for the provision of winches and heavy lifting gear. Army personnel also arrived to help in the removal of debris.

173. At 2 a.m. it was decided by fire officers that the residual gas had dispersed sufficiently to allow oxy-acetylene cutting at least at the lower level of the wreckage. The staff of the Gas Company, having worked in the wreckage under difficult circumstances for about three hours, came independently to the conclusion that there was no further gas in the area and accordingly informed the Police of it. They remained on the site until 8 a.m. More Army personnel arrived to relieve the fire officers. The Army and the Public Works Department had by now provided lighting and heavy earth-moving equipment, especially for the removal of the debris of the upper storeys of Kotewall Court, the remains of which now lay in Babington Path. Air-bags for lifting heavy objects and cutting sets were now used by fire officers.

174. More heavy and lighting equipment was brought in at different periods throughout the night.

175. Up to about 3.30 a.m. 19 persons had been extracted from the wreckage alive and six dead.

(d) From 6 a.m. to 6 p.m. on June 19, 1972

176. At about 6.40 a.m. two streams of water were flowing down the hillside above Kotewall Road, one on to the Road itself and the other on to the lower level of the wreckage. Fire officers dug a ditch to divert the second stream of water towards Kotewall Road. This task was completed at about 8.30 a.m.

177. At 8.30 a.m. a Mr. Henry LITTON's calls for help were heard. Mr. LITTON, an occupant of Kotewall Court, was found trapped in a cavity in the mid-section of the wreckage. To reach him, a vertical shaft of some six to seven feet in depth and a horizontal tunnel of some 20 to 25 feet in length were excavated. The rescue was carried out by members of the Fire Services together with personnel from the First Battalion of the Irish Guards and from the Royal Engineers. The rescue operation continued until 3.30 p.m. when a further major slip occurred in the Po Shan Road area, which necessitated an emergency evacuation of the tunnel area. Once the slip had come to rest and conditions became less hazardous rescue workers again entered the tunnel. From then onwards look-outs were posted to give warnings of further landslips. Relief workers took over at 7.30 p.m. This survivor was finally extricated at 9 p.m. and taken to hospital.

178. To illustrate the difficulties encountered by the rescue workers, a more detailed account of this aspect of the rescue work is at Appendix XIII.

179. With the exception of this survivor, none of the other victims could be rescued as they were unfortunately either already dead or, being in inaccessible cavities, could not be located or reached in time.

180. Throughout the morning search and rescue and the removal of the dead continued. Particular attention was paid to openings in the wreckage. Shouting and listening continued, but no signs of further survivors were detected.

181. These operations were divided into four fields, carried out simultaneously:—

- (1) Tunnelling to reach Mr. LITTON.
- (2) Clearing of debris by the Army from the lower level of the wreckage so as to create working space for the removal of further debris when this became possible.
- (3) Further excavation and continued search of all accessible cavities and crevices within the wreckage.
- (4) Careful removal by hand of all surface materials such as clothing, bedding, etc. from the wreckage to uncover, if possible, further rescue openings.

182. Rescue work having continued throughout the night and the following morning, it was clear by 11 a.m. that all survivors who could be seen or heard had been rescued with the exception of Mr. LITTON. Nevertheless, shouting and listening still continued.

183. Arrangements were made for an army bulldozer to work at the disaster site that evening.

184. As the gas mains were buried within the wreckage it was not until about noon that the staff of the Gas Company was able to disconnect them.

185. Throughout the 19th, rescue workers searched for victims and removed debris. Bodies were located but as they were trapped beneath the collapsed structure and the condition of the wreckage was still unstable and dangerous they could not be removed before the 21st.

186. A mobile crane was now being operated from a platform erected by the Army. Pneumatic tools and oxy-acetylene cutting equipment were also in use. Work on the site was of necessity slow and laborious owing to the dangerous state of the wreckage and the possibility of earth movements.

187. The work of the Army and Fire Services at both levels of the wreckage continued throughout the 19th, 20th and the 21st.

(e) From June 20 to June 22, 1972

188. At dawn on the 20th fire officers started to search the disaster site, looking into cavities and shouting and listening as before. On that day pneumatic drills, K-12 cutting sets, bolt croppers, pickaxes, crowbars, etc., were in use, and a 20-ton mobile crane with a jib-length of 125 feet was provided by the Public Works Department. In the evening of that day further movement of the fractured retaining wall below 21, Po Shan Road occurred and in view of the possibility of a further slip rescue work was suspended for the night.

189. On the 21st fire officers, assisted by the Army, continued to search for bodies and this continued throughout the 22nd.

190. On the 22nd, they were also engaged in removing the loose rubble and in breaking up the concrete structure to a size which could be handled by the available crane. In this they were assisted by a construction company. A pump crew and other fire officers were at the upper level of the wreckage, digging and shovelling mud and debris. During the day there were two alarms owing to movement of sand and mud.

191. Between the 21st and the 22nd, apart from the six bodies mentioned in paragraph 175 six further bodies were extracted.

192. On that day the Director of Fire Services, the Director of Public Works and the Director of Medical and Health Services visited the disaster scene.

(f) On June 23, 1972

193. On the 23rd, search and lookout duties continued.

194. On that day a meeting was held by representatives of the Fire Services Department, the Public Works Department, the Medical and Health Department, the Royal Hong Kong Police Force and the Army, under the chairmanship of the Director of Fire Services. As a result of this meeting it was decided that the rescue phase of the operations was by then complete and that it should enter a demolition/recovery phase of operations. Accordingly, arrangements were made to hand over operations to the Public Works Department. The Director of Fire Services subsequently handed over control to Mr. J. G. STEAN, the Acting Principal Government Building Surveyor.

195. Disinfecting teams were now at the scene spraying at least twice daily. The Army was still busy working with heavy equipment. Construction firms engaged by the Public Works Department moved in.

196. At 4.37 p.m., the Chief Fire Officer (Hong Kong) ordered his personnel to cease work, but retained a full crew with a Station Officer in charge to assist in body recovery.

197. Up to this time, 20 survivors and 12 bodies referred to above had been extricated. Seven more bodies had been located in the wreckage but extrication was impossible.

198. At 5.47 p.m. it was estimated that a further 66 bodies might still be trapped within the wreckage.

SECTION 9 RECOVERY OF BODIES BY DEMOLITION WORK

199. Recovery of bodies by demolition work was carried out by the Public Works Department from June 23 to August 28, 1972.

200. The construction firms engaged by the Public Works Department continued the work of demolition and body recovery. These were extremely complicated and dangerous operations. Demolition normally consists of taking a structure apart in a systematic manner. In the case of Kotewall Court, not a single part of the superstructure was in its original position after the collapse. Because of the nature of the collapse, most of the debris was a tangled mass of reinforced concrete members, pipes, timberwork and building fittings spread over a sloping

area between Kotewall Road and 125/7, Robinson Road, the difference in level being some 80 to 100 feet (See Plate 12). The operation of breaking up concrete and cutting through nets of tangled steel reinforcement was from the start a tedious undertaking. The number of larger pieces which could be removed *en bloc* was very limited. Except for the work done by compressed-air machines and cranes, all demolition and excavation were performed by hand to avoid possible mutilation of bodies.

201. From June 29 work proceeded round the clock from both the Kotewall Road and Robinson Road levels. To lift debris from the latter level a demountable winch-derrick—the only type of lifting device possible because of restricted access through adjacent building—was installed. A second 20-ton crane was installed at a later date on the construction site of I.L. 8171, 12, Babington Path to serve the centre of the debris pile, as it became necessary to withdraw the crane at the upper level.

202. Accessible cavities having been so thoroughly searched during the rescue operations, it was not until June 27 that the next body was recovered. Since June 23, when the Public Works Department took over operations, a total of 55 bodies have been recovered from the wreckage. Records show:—

- 1 body on June 27
- 1 body on June 28
- 44 bodies between July 4 and 29
- 4 bodies between August 7 and 9
- 3 bodies on August 16
- 1 body on August 17
- 1 body on August 28.

SECTION 10 REMEDIAL WORKS DONE BY THE PUBLIC WORKS DEPARTMENT AFTER THE DISASTER

203. A written report prepared by Mr. J. G. STEAN dated August 2, 1972 showed the remedial work done to date by the Public Works Department. This evidence is reproduced in Appendix XIV. We approve of the measures described therein.

204. We understand that permanent remedial measures for the restoration of the slip area are under consideration by the Department.

CHAPTER IV

THE DISASTER AT SHIU FAI TERRACE (WAN CHAI)

SECTION 1

INTRODUCTION

205. By comparison with the disasters at Sau Mau Ping and Po Shan Road, in terms of loss of life and damage to property, the landslips at Shiu Fai Terrace were relatively minor in character. But some of the considerations involved in analysis of these landslips are matters of principle, having wider application than to the Shiu Fai Terrace area, and it is for this reason that they have received detailed attention by us.

206. Evidence submitted showed that the rains which fell over the period June 16–18, 1972 caused six major landslips affecting buildings in the Shiu Fai Terrace area, together with a number of other minor slips which were mainly on Crown Land abutting Stubbs Road. Two major slips occurred on the sites of buildings under construction, and in one of these a watchman was killed. It was to the latter of these two landslips that we directed our attention particularly, but the prevalence of landslips in the area was a factor which we could not ignore.

207. Written evidence indicates that the Shiu Fai Terrace area appears to consist almost wholly of highly weathered granite, decomposed *in situ* to a silty sand with granite boulders of varying sizes interspersed throughout the soil mass.

208. There are a number of natural stream courses on the high ground to the south of the developed land, of which the major streams discharge into culverts to traverse the built-up area. Surface water from the buildings and paved areas is discharged through a system of storm-water drains and culverts either to natural stream courses or to the main storm-water drainage system. It has been submitted, and we concur with this view, that the existing storm-water drainage system seems generally adequate for its purpose and that it would not be practicable to attempt to drain all the area above the cutting slopes to the south.

209. The area, now known as Shiu Fai Terrace, was leased for 75 years on October 4, 1920, as I.L. 2302, totalling 310,610 square feet. Included in the lease conditions were the requirements that not more than 20 European-type houses were to be erected not over 35 feet high except with the consent of the Governor in Council. By the end of 1948 four buildings, each two-storey high, had been constructed on the Lot.

210. The question of modifying the original lease conditions was considered by Government on November 19, 1959, and after initial deferment to investigate the possibilities of improving the Stubbs Road/Shiu Fai Terrace junction, it was agreed on November 26, 1959 that modification could be given to allow 12-storey development at suburban coverage. Following the splitting-up of I.L. 2302 into sections, further lease modifications were given in 1963/64 with the result that from 1965 onwards the general pattern of development over the area comprised 12-storey domestic blocks over one or two storeys of carparks.

SECTION 2

THE LANDSLIPS

211. At 1.30 p.m. and 4.00 p.m. on June 16, 1972 two landslips occurred on the hillside cutting at the rear of Sections S and T of I.L. 2302, which were the building site immediately adjoining Sections N, O, P and W of I.L. 2302. Later on that same day, at about 11.30 p.m., a third landslip occurred on the hillside cutting behind Sections N, O, P and W where building construction work was going on. This last landslip dislodged a greater quantity of rocks and soil than either of the earlier ones and buried a building contractor's watchman who had been in a first floor room at the rear of the building on Section P of the Lot at that time. The Fire Services Department was notified by Police Island Radio Control Centre at 11.51 p.m. and fire officers arrived at 11.55 p.m. The watchman was found at 12.40 a.m. on the 17th and was given oxygen. He was dug out from the mud alive at 3.15 a.m., but unfortunately died from his injuries on arrival at the hospital at 3.23 a.m.

212. Although, in fact, three separate landslips occurred on the same day, the areas of the individual slips merged into one another, leaving a continuous scar on the hillside cutting faces as if a single landslip had occurred (see Plate 13).

SECTION 3

HISTORICAL AND TECHNICAL CONSIDERATIONS

213. Approval of plans for construction of a 12-storey domestic building over two storeys of carparks on Sections N, O, P and W with extensions of I.L. 2302 was first given on January 30, 1965. Application for consent to commence site formation work was made on November 25, 1969, but this was refused on the grounds that the approved plans were no longer valid. Consent was granted on April 17, 1970, following approval of amended building plans on December 30, 1969.

214. Amended site formation plans were submitted on March 11, 1971, but were disapproved on May 4, 1971, on the grounds that the actual cutting slope was steeper than the 50° shown by the authorized architect, Mr. Wallace CHIU, on his plans. At the same time, Mr. CHIU was advised that were his slope to be steeper than 50° he would be required to undertake that it would be stable. In resubmitting his plans on May 19, 1971, he gave this undertaking in an accompanying letter.

215. The plans were again disapproved on June 17, 1971, because it was considered, *inter alia*, that the upper cutting slopes were excessively steep.

216. Mr. CHIU resubmitted the plans on September 2, 1971, enclosing a second undertaking as to the stability of the slopes, followed by a further letter dated October 6, 1971, enclosing copies of letters from Inter Pacific Ltd., site investigation contractors (dated October 5, 1971), and from Mr. P. LUMB (dated September 29, 1971) containing the results of soil test and averring that a safe slope for a cutting 64 feet high would be 75°.

217. Accordingly, on October 28, 1971, the amended site formation plans were approved.

218. An application to erect two blocks of apartments on Sections S and T and their extensions was made by Mr. E. Y. WU, authorized architect, on March 12, 1969. These buildings were to be of 12 storeys over two storeys of carparks and the plans thereof were subsequently approved on June 16, 1969. On October 9, 1969 the authorized architect submitted the site formation plans. While no structural objections to these plans were raised at that time by the Buildings Ordinance Office, the Chief Engineer, Highways (Hong Kong) Division suggested that site investigation should be carried out to prove that the cutting slope at the rear was of solid compact rock. He also recommended that, were the slope not of rock, the angle of slope should be ten feet vertical to six feet horizontal with a five-foot wide berm with nine-inch surface channels at every 25 feet of height. This was transmitted to Mr. WU who withdrew the site formation plans on November 7, 1969.

219. On November 10, he resubmitted his plans and at the same time confirmed that the cutting slope would be of solid rock, but undertook to reduce the angle of cutting if the sub-soil was found to be other than of rock. The Chief Engineer, Highways (Hong Kong) Division, commented on these plans to the effect that if the cutting was not of rock the width of the access at the rear of the building would be reduced to eight feet.

220. The plans were accordingly approved on January 14, 1970, and consent to commence work was given on January 24, 1970.

221. Amended site formation plans were submitted on August 11, 1970 to the Building Authority, on which the Chief Engineer, Highways (Hong Kong) Division, commented to the effect that the levels were incorrectly shown, that the maximum height between berms was 30 feet and that the minimum width thereof should be five feet.

222. The plans were subsequently amended to the satisfaction of The Chief Engineer, Highways (Hong Kong) Division and were approved on October 27, 1970 with a covering letter containing a warning about unauthorized cutting into Crown Land.

223. Following an investigation into the strength of the concrete being used in the structural frame of the buildings the Government Building Surveyor, on May 26, 1971, instructed the Chief Structural Engineer to have the cutting at the rear of the buildings examined; to report on whether the work had been carried out according to approved plans and to prepare a sketch showing the actual cutting with angles of slope, position of retaining walls, etc. He also requested advice as to whether the existing cutting could be considered safe or, if not, what additional precautionary measures would be required to render it safe. A structural engineer subsequently reported on June 4, 1971 that although the cutting differed from that shown on the authorized architect's plans, having an actual angle between 53° and 56°, there was no apparent structural danger.

224. At a meeting with the then Acting Chief Structural Engineer on June 9, 1971 the authorized architect stated that the rear slope had actually been cut in accordance with plans approved on January 14, 1970, but he undertook to investigate its stability further since it was not in fact rock. No further report was received.

225. On November 1, 1971, Mr. NG Chi-chai, authorized architect, assumed responsibility for the project vice Mr. E. Y. WU.

226. While differing appreciably in detail the development proposals submitted by the respective authorized architects for the above building projects had certain points of similarity, sufficient to justify them being considered collectively by us. Both projects were for 12-storey domestic building over two floors of carparks, necessitating access through the rear of the buildings and cutting into the hillside slope. To achieve their respective development proposals both authorized architects adopted unusually steep slopes for their cutting faces, which they justified by assuming that the bulk of the cutting was to be made in solid rock. When it was pointed out to each architect by the Public Works Department authorities that the hillside slope might not be solid rock and that further investigation was necessary to determine its nature, one of the architects had such an investigation carried out, which indicated that for the material in question the safe heights for slope angles of 90°, 75° and 60° with the horizontal were 43 feet, 64 feet and 103 feet respectively, adopting a safety factor of 1.5 against collapse. Mr. NG, on the other hand, apparently did not investigate the stability of the rear slope to his site, as mentioned earlier, but maintained that the cutting was carried out in accordance with the plans approved on January 14, 1970.

CHAPTER V

INCIDENTS IN OTHER AREAS

227. We have also examined the circumstances in which deaths occurred at the following places:—

- (1) Ap Lei Chau,
- (2) Belcher's Street (Western District),
- (3) Bullock Lane (Wan Chai),
- (4) Chai Wan and
- (5) Shau Kei Wan.

SECTION 1

AP LEI CHAU

228. Sometime after 1.00 p.m. on June 16, 1972, a landslip occurred at 8 Pak Sha Wan, Ap Lei Chau, burying the pigsties owned by a pig-breeder there. It was suspected at the time that the pig-breeder's wife was trapped in the mud and rocks fallen from the hillside. Fire officers were requested at 2.13 p.m.; and they went to the scene by launch. Rescue operations had been in progress by 2.46 p.m. They spent nine hours in a vain attempt to locate the victim. Her body was eventually dug out from the mud by fire officers on the following day. The pig-breeder's employee had been living in the area for over ten years. His evidence (which we accept) was that there had not been any landslips there during the exceptionally heavy rainfall in Aberdeen in 1966, nor had there been any other landslips in the area during the period of his residence there.

SECTION 2

BELCHER'S STREET (WESTERN DISTRICT)

229. On June 17, 1972 there was a minor incident of rockfall from the hillside behind 44, Belcher's Street, but no report of this was made to the Police or the Fire Services Department. Sometime in the morning of June 18, 1972 a more serious landslip occurred at the hillside behind 42, 44 and 46, Belcher's Street (see Appendix XV), killing a workman who was in a wooden shed situated between 46, Belcher's Street and the hillside. The Fire Services Department was notified by the workman's employer at 11.10 a.m. and fire officers arrived at 11.13 a.m. With considerable danger to their personal safety Assistant Divisional Officer KWAN Sai-yiu and Fireman LAM Kwok-hung supplied oxygen to the workman, and then extricated him from the boulders, rock, mud and debris. Unfortunately, he soon died from his injuries. During the rescue operation another landslip occurred at the same location and, as soon as the fire officers and the victim had left that spot, a much larger landslip took place, engulfing completely the rescue area.

SECTION 3

BULLOCK LANE (WAN CHAI)

230. Sometime after 12 noon on June 17, 1972 a landslip occurred at the slope just below the tennis court of the Ruttonjee Sanatorium, totally demolishing 4, Bullock Lane and partially demolishing 2, Bullock Lane, the adjoining building (see Appendix XVI). Two residents of 4, Bullock Lane, a youth and a girl, and a woman residing in 2, Bullock Lane were killed. Thirteen persons were injured.

231. Fire officers were summoned at 12.23 p.m. and arrived at 12.25 p.m. Police arrived at the scene at about 12.30 p.m. Divisional Officer S. M. ELCOCK of the Fire Services Department was in charge of operations. Rescue work was carried out under the threat of imminent further collapse of 2 Bullock Lane, and was hampered by the congested traffic and onlookers in Wan Chai Road, the main road leading to Bullock Lane. By about 8.30 p.m. all known trapped survivors had been rescued. Shortly after 8.30 p.m. a further collapse of 2, Bullock Lane occurred, temporarily interrupting search and rescue operations.

232. The woman was dug out on June 26, the youth on the 27th and the girl on the 28th.

SECTION 4

CHAI WAN

233. At about 9.30 a.m. on June 16, 1972 there was a heavy downpour at Wan Tsui Road, Chai Wan, and the streets were flooded. The body of a youth, apparently drowned, was discovered beneath a military vehicle.

234. It is clear from the evidence that the flood-water formed a swift current flowing down Wan Tsui Road which was fairly steep. It would have been quite unsafe to stand or walk in the water, although the evidence showed that the water was no more than two feet deep.

SECTION 5

SHAU KEI WAN

235. Three separate areas in Shau Kei Wan were examined by us, namely:—

- (1) Ma Shan Village,
- (2) Nam On Fong Village and
- (3) Tsin Shui Ma Tau Village.

Appendix XVII is a plan of these areas.

236. The huts in the Ma Shan, Nam On Fong and Tsin Shui Ma Tau Villages, erected without lawful authority on Crown land, are in clusters perched on the hillsides or in the valley. Squatter huts in the Colony are unlawful, but they are tolerated if they have been included in the Resettlement Department's squatter surveys made from time to time. The latest survey was carried out in 1964. When the land on which they stand is required for permanent development, the huts would be cleared and their occupants resettled. The Resettlement Department is primarily responsible for ensuring that the existing surveyed squatter huts are not enlarged and no new structures are erected. The Department is also responsible for resettling the squatters on planned clearances.

237. The Resettlement Department is not, however, responsible for the physical condition and safety of the tolerated squatter areas nor is the Public Works Department consulted as to the question of safety before toleration of these huts is decided. These areas are visited by officers of the Resettlement Department on routine patrol to prevent the erection of new squatter huts. It is not part of their duty to ensure that the tolerated area or the squatter huts there are safe for occupation. If an officer on his patrol should notice any danger, or receive any complaint of a danger, he would inform the Public Works Department. After a joint inspection of the spot in question by officers of both Departments concerned, the Public Works Department would then take the necessary action to remedy the situation, or alternatively, the squatters may be resettled. In bad weather conditions, e.g. storms, heavy rains and floods, the officers of the Resettlement Department patrol their respective areas once a day and would, if necessary, advise the residents to evacuate the area and move to temporary shelters.

(A) MA SHAN VILLAGE

238. At about 10.30 a.m. on June 16, 1972 a landslide occurred at a cliff behind an unnumbered hut at the end of Hoi On Street, Ma Shan Village. The hut was completely buried in the earth and two men in the hut were killed. The bodies were dug out by fire officers in the afternoon of that day. There were no eye-witnesses of the incident.

239. A few days before the incident, no sign of possible landslide was observed nor was any complaint received during routine patrol by officers of the Resettlement Department.

(B) NAM ON FONG VILLAGE

240. At about 6.30 a.m. on June 16, 1972 a landslide occurred at a cliff at the Village and several boulders fell on to a newlybuilt hut there. A child of four, probably in his attempt to escape from the hut, fell on to the cement floor of the hut, receiving head injuries from which he later died. There was one person injured.

241. Report of the incident was first received by the Police at about 7.11 a.m. and a party was immediately sent to the scene.

242. When the area was visited by a Resettlement Department officer on his routine patrol a few days prior to the incident, there was no sign of a possible landslide, nor did he receive any complaints.

(C) TSIN SHUI MA TAU VILLAGE

243. There were a number of unauthorized huts in the Village. At about 1.00 p.m. on June 18, 1972 a female resident of one of these huts was washed away by the flood and drowned, presumably while trying to reach her home. The flood was probably caused by the choking of drainage-outlets in the rainstorm. There were no eye-witnesses of the incident.

CHAPTER VI

CONCLUSIONS AND RECOMMENDATIONS

244. The evidence which we have heard has led us to the following conclusions. Some of these are of a general nature, whereas others are specifically related to particular incidents. For ease of reference we have classified them under these two headings. The order in which they are listed does not imply any order of significance or preference. We also submit our final recommendations.

SECTION 1 CONCLUSIONS

(A) SPECIFIC CONCLUSIONS

(a) Sau Mau Ping

245. This landslide, which occurred in a highway embankment constructed under the supervision of the Public Works Department, forms the subject matter of our Interim Report. The Interim Report was submitted to Your Excellency before the appointment of Mr. Charles CHING as counsel, representing the interests of the victims, at the Inquiry. Mr. CHING asked for the recall of one witness to give further evidence on the Sau Mau Ping disaster, and, in his final submission, he made several references to this disaster. Mr. CHING questioned whether the Sau Mau Ping embankment was constructed in accordance with the specification laid down for its construction; whether the fact that the existing drainage did not allow for rising ground-water was a fault in design; and whether the manner of inspection adopted for such embankments was adequate.

246. Our conclusion with respect to this landslide is contained in the Interim Report. In view of Mr. CHING's comments it is repeated below for the sake of completeness:—

“The burst water main, discovered on 22nd May, 1972, could certainly have contributed to the saturation of the underlying soil to a considerable depth and it is likely that the effects of such saturation would not have been fully dissipated before the onset of the rainstorm on 16th June, 1972. However, because of the time interval between these events, and the amount of rain—over 700 mm.—which fell on the area during the period 16th–19th June, 1972 inclusive, the burst water main cannot be considered as a major factor in causing the landslide. The shallow nature of the landslide itself and the absence of any positive evidence to indicate infiltration from utility services, other than that mentioned above, lead us to conclude that the landslide was due primarily to softening of the fill material caused by infiltration of rain-water mainly through the sloping face, as a result of an exceptionally long and intense rainstorm.”

247. The Sau Mau Ping embankment was designed in accordance with well-accepted engineering principles for work of this nature when carried out in the tropics. Some of these principles are outlined in Chapter II Section 2(D) of this Report. The drawings, photographs and the model of the site show that the configuration of the embankment complied with the design particulars. The surface drainage of the embankment slope was done in accordance with normally accepted good engineering practice based on the knowledge available at the time of construction. It was later improved because of its inadequacy to cope fully with the unusually heavy rainstorms of 1966.

248. No formal evidence was presented to us relating to the supervision of construction of this embankment, nor did we ask for such evidence to be produced. In engineering construction work of this nature it is an established fact that any major deficiencies in the construction materials and methods will normally become evident within a relatively short time after completion. It is specifically to allow for any such undetected deficiencies that all good engineering and building construction contracts include provision for a maintenance period following completion, during which period the contractor must make good all defects at his own cost. The contract for Sau Mau Ping complied with this practice.

249. We questioned Mr. G. A. G. SAPSTEAD, the Acting Principal Government Highway Engineer, as to whether any undue road maintenance had to be carried out on Hiu Kwong Street above the embankment during the intervening years following completion of the embankment. He said that there was no record of anything more than normal maintenance. This certainly removed any suspicion of inadequate compaction of the embankment material or noticeable settlement of the embankment itself. Furthermore, as the embankment was subjected to intense rainfall in 1966, it is reasonable to suppose that construction deficiencies would then have become noticeable.

250. Rising ground-water results from saturation of the underlying soil owing to percolation of water through its pores and fissures. The water may percolate through the ground surface in the vicinity of the area in question. But in hillside slopes the source of entry may lie at a considerable distance up the hillside from the area where its presence constitutes a danger. It then flows down by gravity to the lower levels where it may seep through the surface under particular conditions. Further-more, the natural direction of flow of such water may be changed considerably as a result of road and building development along the hillside slopes and the continuing development of the area above the Sau Mau Ping landslip is certainly conducive to such directional changes.

251. While safety must be the dominant consideration in the execution of engineering design, it is universally accepted that in catering for designs to resist the forces of nature, it is impracticable and, indeed, often impossible to cater for all possible contingent forces, if such designs are to remain practicable and economical. We subscribe to this view and in the case of the Sau Mau Ping embankment we have no fault to find with the manner in which the design and construction of the embankment was carried out.

252. Mr. CHING's remaining suggestion on the mode of inspection of slopes of this nature has been dealt with in our recommendations in the Interim Report.

(b) Po Shan Road

(i) Technical Considerations

253. "A Report on the Po Shan Landslide" prepared for the Acting Director of Public Works by Mr. A. J. VAIL, which was submitted in evidence before us, is reproduced in Appendix V.

254. As the cause of the landslip, Mr. VAIL has suggested the following combination of circumstances:—

- "(1) The slope and nature of the material in the hillside.
- (2) The almost unprecedented rainfall that occurred in May and June of 1972 culminating in the storm of 16th, 17th and 18th June.
- (3) The deep cutting in I.L. 2260."

255. This combination of circumstances has been established as "jointly sufficient causes" for the landslip; that is to say, that without any one of them the slip may not have happened or may not have been so disastrous.

256. In our examination of the evidence, we have directed our attention to each of these three circumstances separately and in combination with one another.

257. The evidence submitted both by Mr. VAIL and Mr. EASTAFF indicates that many of the hillside slopes in Hong Kong, particularly those formed of colluvial soil, are in a state of limiting equilibrium. This is evident from the regular recurrence of landslips of varying severity which have always been a feature of life in Hong Kong. To quote Mr. VAIL's statement:—

"Since the geological processes of decomposition, transportation and deposition will continue, the stability of the hillsides will continue to decrease and further slips will occur whenever there are periods of prolonged or intense rainfall.

"The deterioration of the hillsides can be retarded in selected areas by civil engineering means:

"Slopes can be protected from increased saturation by the provision of surface drainage and of relatively impermeable surface membranes."

258. We do not wish to consider any of Mr. VAIL's statements out of the context in which they were made. Neither do we consider the above statement by Mr. VAIL to represent or to imply any recommendation for wholesale removal of Hong Kong's existing hillside vegetation in favour of chunam or similar types of impermeable surface membranes. Indeed, were such choice to become a matter for serious consideration, we would have no hesitation in recommending complete restriction of projects requiring large scale earth-works in the areas concerned. In such circumstances reliance should be placed upon well-designed surface-drainage systems aided by internal drainage of the soil mantles forming the slopes. This would minimize the existing risk to life and property at lower levels arising from future landslips which would undoubtedly take place from time to time. It would also preserve the existing natural foliage.

259. The circumstances relating to rainfall have been dealt with, generally, in Chapter II of this Report. No evidence was given in the rainfall records which pin-pointed the Po Shan Road area as one of especially intense rainfall, when compared with other areas of Hong Kong. Hence, no further consideration of rainfall is necessary in this Section of the Report.

260. With regard to the deep cutting in I.L. 2260 Mr. VAIL had this to say in his report:—

“. . . —the excavation in I.L. 2260 was responsible for the location and magnitude of the 9 p.m. landslide and for its catastrophic mode of failure since the excavation effectively removed the toe of this section of the hillside.”

261. Because of possible implications arising from this statement, both Mr. VAIL and Mr. S. L. HO were examined at considerable length on this important aspect of the hearings.

262. The history of redevelopment of I.L. 2260 as presented to us is set out in Chapter III of this Report. However, in spite of much testimony and cross-examination the detailed happenings which occurred on this site over the ten-year period extending from 1962 to 1972 remain something of a mystery. Plate 1 shows the approximate nature and character of the site as it existed prior to 1962 when redevelopment work commenced.

263. When questioned on what he meant by “the deep cutting on I.L. 2260”, Mr. VAIL explained that this meant the work carried out on the site during 1963. On being asked for an opinion on the photograph shown in Plate 3, which depicted the site as it was in May 1970, Mr. VAIL said that the upper part of the slope was very steep and could be at an angle of between 65° and 85° with the horizontal. On the assumption that the excavation and cutting carried out in 1963 was done in accordance with the approved plans prepared by Mr. NG Chun-man, the authorized architect, he did not believe that gradual erosion caused by weathering over the ensuing seven or eight years could have led to a change of slope angle from 50° to 80° unless landslips of a particular type and location had taken place on the slope itself. He also stated that any steepening and any increase in depth of a given cutting would not only increase the probability of slipping but would also cause a landslide to occur sooner. In his opinion, this would make the landslide, if anything, larger than it would have been if the cutting had not been steepened or deepened. In the Po Shan Road area, where the whole hillside is at an angle of 36° Mr. VAIL’s view was that any cutting steeper than 36°, would in fact decrease the stability of the hillside in that area.

264. Apart from the evidence of Mr. VAIL, there was submitted in evidence a technical report on the Po Shan Road landslide prepared by Mr. J. J. SCHOUSTRA, President of Fugro, Inc., Consulting Engineers and Geologists, of Long Beach, California, at the request of Mr. K. K. CHU, of Messrs. Lau, Chan & Ko, Solicitors. The conclusions drawn by Mr. SCHOUSTRA are as follows:—

“(1) The development of the slide can be attributed to three principal causes:

- (a) Record rains at the time of and prior to sliding;
- (b) Removal of support from the toe of the slide at the time of site formation for the original ‘Tsuen Won View’ homes, many years prior to 1961.
- (c) Presence of a remarkably thick (70 feet and more) soil mantle over the existing natural slope. This soil would have very little shear strength upon saturation.

“(2) Two secondary causes can be listed:

- (a) Failure of a block of soil from the toe of the main slide during Typhoon “Rose” in 1971.
- (b) Concentration of large quantities of surface and subsurface water in and around the slide mass.

“(3) None of the site formation activities since 1961 appear to have contributed in any manner to the development of the slide.”

265. Further technical evidence requested by us was submitted in the form of comments on Mr. VAIL’s report by Mr. P. LUMB, and Dr. C. L. SO. Neither Mr. LUMB nor Dr. SO disagreed significantly with the combination of the circumstances relating to the cause of the Po Shan Road landslide, as set out in Mr. VAIL’s report (see paragraph 254).

266. Consideration of all the evidence submitted to us, aided by our own expertise, has led us to conclude that the primary cause of the Po Shan Road landslide is to be found in the combination of the three circumstances enunciated by Mr. VAIL.

267. The first of the three circumstances refers to the slope and nature of the material in the hillside. These are both natural phenomena dictated by time and the elements. But the evidence shows that these phenomena are each undergoing a continuous process of change by reason of decomposition, transportation and migration. Furthermore, it is accepted that the existing natural hillside slopes, where made up of colluvial material, are in a state of limiting equilibrium, since they are not the final slopes of these hillsides. Excavation or cutting of those slopes automatically increases the slope angle and this increases the risk of landslips, however small that increase in risk may be. It is an established fact of engineering knowledge that the greater the area of cutting and the steeper the slopes of the cutting face, the greater will be the risk of a landslide.

268. This raises the question as to whether Government should permit intensive development of those mid-level areas where the soil is of colluvial origin and the hillside slopes are in excess of 35°. We are well aware

of the intense pressures brought to bear in Hong Kong for increasing building development to meet the rapid growth in population. We have also noted the evidence submitted to us that the deterioration of the hillsides can be retarded in selected areas by civil engineering means and that retaining walls, if properly designed and constructed to withstand the forces involved, can be used effectively to replace existing earth supports.

269. The second of the three circumstances refers to rainfall. This again is a natural phenomenon. Probabilistic estimates of recurrence periods for extreme rainfalls of different durations in Hong Kong have been made by the Royal Observatory, Hong Kong, since 1965. They have been available in published form as R.O. Technical Memoir No. 10 since 1968. Irrespective of the availability of such estimates in published form it is a known fact of life that Hong Kong is an area subjected to very heavy and prolonged rainstorms at relatively frequent intervals and that landslips of varying sizes arising from this cause occur almost annually.

270. The third of the three circumstances refers to the deep cutting. To have left a major cutting on I.L. 2260 unsupported and virtually unmaintained over a period of more than seven years has, in our view, been courting disaster. While it is true that this excavation and cutting was planned and directed by Mr. NG Chun-man in 1963 for the Linton Investment Co., Ltd., responsibility for its deterioration and lack of support during the ensuing years must rest on the shoulders of Mr. S. L. Ho and on the owners of the site.

271. In this connection, apart from that of Mr. VAIL, expert evidence was also received from Mr. J. J. SCHOUSTRA and Mr. K. A. PHILLIPS.

272. Mr. SCHOUSTRA stated in his written evidence that "none of the site formation activities since 1961 appear to have contributed in any manner to the development of the slide". In support of this contention he put forward as one of three principal causes for the slip the "removal of support from the toe of the slides at the time of site formation for the original 'Tsun Won View' homes" which are shown on Plate 2. Mr. SCHOUSTRA evidence assumed that the initial slip, which took place on June 17, 1972, surfaced at an elevation above 500 feet P.D. and possibly as high as 530 feet P.D. and that the surface of failure for the main slip broke out of the slope at about the same elevation as the initial slip of June 17. His concept of how the failure might have occurred is depicted in Appendix XVIII, extracted from his report. Mr. VAIL's opinion on the possible location of the failure surface is shown diagrammatically in Appendix XIX which is an overlay of the diagram attached to his report. On this overlay he had shown the positions of boreholes B7 and D1 in relation to the slip profile, noting in his evidence that while these holes were not on the actual section depicted in the Figure, their distances from Conduit Road were accurate. According to Mr. VAIL, a piece of asphalt, probably a fragment of the Po Shan Road surfacing, was encountered in borehole B7 at elevation 479 feet P.D., and a piece of uncorroded steel in borehole D1 at elevation 469 feet P.D., indicating slipped material at least to these depths at the locations concerned.

273. Mr. K. A. PHILLIPS, a resident partner of Messrs. Scott Wilson Kirkpatrick & Partners, Consulting Civil and Structural Engineers, Hong Kong, submitted comments on various technical reports, including those of Mr. VAIL and Mr. SCHOUSTRA, at the request of Messrs. Lau, Chan & Ko, Solicitors. Mr. PHILLIPS' concept of the mechanism of failure of the Po Shan Road landslip is given in Appendix XX. In support of his views he advances the following reasons:—

"It is presumed that the steep face at the rear of I.L. 2260 suffered a rotational failure which, remarkably, did not totally collapse into I.L. 2260 early on 17th June. The toe of the slip is shown at the base of the steep face because to take the toe further north, say at or under the sheet piling, almost certainly would increase the restraining force more than it would increase the overturning force. Furthermore it accords with the evidence that the sheet piling rotated northwards due to 'slipped' material pushing it over at the top. It is not clear why the slope did not collapse entirely on the morning of 17th June, but the sector of ground that had moved must have remained delicately poised for the further 36 hours.

"Once the sector north of Po Shan Road had failed vital support to the natural slope south of the road must have been lost. This slope, which like all surrounding ground at 37° would have had a factor of safety decreasing towards unity (i.e. failure) as the rains continued, must have been subject to further strains. By now it must have been just a question of time before the factor of safety of the slope above (i.e., south of) Po Shan Road would arrive at unity. When this occurred at 20.50 hours on 18th June the mass of earth must have slid into the delicately poised sector of ground ahead of it after which they crashed forward together."

274. In his comments on Mr. SCHOUSTRA's conclusions Mr. PHILLIPS considered that Mr. SCHOUSTRA's third conclusion "appears to be too sweeping".

275. Both Mr. SCHOUSTRA and Mr. PHILLIPS showed the probable failure surface breaking the surface of the ground south of the sheet pile wall. Their arguments for a failure surface emerging in this area hinged primarily on the fact that, prior to collapse, the sheet piling rotated northwards due to pressure from the "slipped" material pushing it over at the top.

276. Mr. VAIL, on the other hand, showed the failure surface as breaking the surface at the toe of the slope which he had diagrammatically shown as extending down almost to the level of Conduit Road in spite of the evidence relating to Mr. NG Chun-man's site formation work and Mr. S. L. HO's written statement that the only general excavation on I.L. 2260 carried out by Tai Shun Construction Company comprised "levelling of the site from Conduit Road to about 60 feet inward".

277. Under cross-examination Mr. VAIL said, "I think the sheet piles wouldn't have influenced where the slip daylighted at all. They are such flimsy things . . .".

278. If Mr. HO's evidence on the limit of excavation undertaken is assumed to be correct, that obtained from boreholes D1 and B7 which were located over 75 feet in from Conduit Road supports Mr. VAIL's contention. Furthermore, the excavation carried out immediately to the north of the sheet pile wall for the purposes of constructing the proposed retaining wall would create a local plane of weakness within the soil mass allowing initial tilting of the sheet piles as part of a more general movement. An additional consideration which must also be taken into account is the fact that in the ensuing rescue and remedial works pieces of sheet piling were found in the landslip debris as far north as Kotewall Court and even below this level. One can only infer that these pieces must have formed part of the sheet pile wall at I.L. 2260.

279. Taking into account all the above factors and considerations and using our own expertise, we accept Mr. VAIL's concept of the failure surface.

280. We have considered all the evidence submitted in relation to the structural design and the strength of materials used in Kotewall Court. This evidence indicates that some of the materials used in the structure were of lower strengths than those specified in the design specification. Nevertheless, these deficiencies were relatively minor in character. The structural design was executed in an acceptable manner and was capable of resisting the normal forces which are to be expected on a building of this nature. We have no fault to find with the manner in which Kotewall Court was designed and constructed and we conclude that its collapse was the result of impact of forces which were beyond the bounds of any reasonable expectation. We are of the opinion that even if the building had been satisfactory in every respect it could not have withstood the force of the landslip.

(ii) *Rescue Operations*

281. The rescue operations presented special difficulties:—

- (1) The material from the slip was at first in a semi-liquid state and remained very wet and soft for a long period.
- (2) There was therefore no prospect in the first instance of reducing the level of this material at Kotewall Road, the only possible point of entry for heavy plant.
- (3) In any event, any attempt to do this would necessarily have severely interfered with the rescue operations being conducted from this level.
- (4) While the concrete in the building had failed in many places because of the collapse, the reinforcement had remained intact, leaving "pockets" within the wreckage. Large scale dismantling and clearance were therefore impracticable in the initial stages.
- (5) Owing to instability of the wreckage and the surrounding area, the number of rescue workers who could work there was limited. To exceed this limit would have endangered the workers as well as the victims.
- (6) The presence of gas at the early stages prevented the use of electrical and mechanical equipment.

282. We are satisfied that the tools and equipment used by the Fire Services Department for rescue work were suitable and in sufficient supply. These are listed in Appendix XXI.

283. Heavy equipment could not be used at the Kotewall Road level of the wreckage because of instability of the ground and the possible danger of further slips. They could not be used at the bottom level of the wreckage because of the limited headroom of entry already referred to. With persons still trapped in the wreckage, the danger of injury or mutilation by heavy equipment is obvious. Experience shows that such rescue operations can usually be carried out more effectively by hand and with small tools. It would be highly dangerous to disturb a collapsed building with people trapped inside because of the possible train of consequences. The building, therefore, must be dismantled in small pieces with the minimum disturbance of the wreckage mass. In the present situation, the combination of adverse circumstances made rescue work well-nigh impossible. We are therefore satisfied that the decision not to use heavy equipment in the early stages was correct.

284. The Army and the Police placed themselves under the command of the fire officer in charge. There were frequent meetings between them to plan operations, and liaison and co-ordination was efficiently maintained

between these services throughout the relevant period. We consider that there was at all times close co-operation between the services which took part in rescue operations.

285. We are further satisfied that the decision of the Fire Services not to use electrical and mechanical equipment in the presence of butane gas and towngas was correct. Though there was no leaking gas as such in the area, it was evident that residual gas in the pipes escaped during the night of the disaster. In theory, where the atmosphere is mixed with towngas and air, the possibility of explosion is dependent upon the relative proportions of gas and oxygen present. In the opinion of the Senior Distribution Engineer of the Gas Company, as there was but a small quantity of residual towngas at low pressure within the pipes, the danger of an explosion in an open area was extremely unlikely, despite the strong smell of gas. However, he was of the view that butane gas, being heavier than air, would settle into crevices in the wreckage, thereby causing danger. The fire officers who were obliged to make a spot decision considered that the presence of butane gas and towngas, particularly within the crevices of the wreckage, made it dangerous for electrical and mechanical equipment to be used. It was a difficult decision to make, and one which did not permit the slightest miscalculation. We approve of the decision of the Fire Services.

286. Taking all the circumstances into account, we consider that the lack of liaison between the Fire Services and the Gas Company mentioned earlier, regrettable though it may be, did not affect the result of the rescue operations.

(c) Shiu Fai Terrace (Wan Chai)

287. Leaving aside the question as to what constitutes an acceptable risk for work similar in nature to that at Shiu Fai Terrace, the tragic events of June 16–18, 1972 leave no doubt that the landslips which occurred during this period resulted from excessive cutting into the hillside at slopes steeper than could be sustained by the natural ground when saturated with moisture from the unusually heavy rainstorms which occurred.

288. Based on the evidence submitted to us, we find that for cuttings extending up to 130 feet high, at slope angles of 50° and more, in decomposed granite material, as occurred at Shiu Fai Terrace, the investigations upon which this site formation work was based were insufficient to ensure an adequate margin of safety against collapse, bearing in mind the climatic conditions of Hong Kong.

(d) Incidents in Other Areas

(i) Ap Lei Chau

289. This incident, in our view was an unfortunate collapse of a natural slope owing to natural causes with no construction implications.

(ii) Belcher's Street (Western District)

290. We find that this collapse occurred as a typical rockfall which is liable to occur in steeply-sloped cuttings in partly-decomposed rock, following periods of intense rain. It forms one of the natural hazards which have to be accepted by people who dwell or work beneath such cuttings.

(iii) Bullock Lane (Wan Chai)

291. The evidence submitted on the engineering aspects of this landslip was incomplete. On balance, we find that the landslip was partly caused by cutting into the existing slope to allow unauthorized extension of the property known as 4, Bullock Lane, combined with the presence of a defective drain higher up the slope. No evidence was submitted to indicate whether the drain had been rendered defective as a result of the building extensions or not.

(iv) Chai Wan

292. The evidence submitted on this case showed that it was a drowning fatality owing to flooding arising from the blockage of a catchpit at the end of Sui Man Road. This blockage was due to debris such as baskets washed down from the squatter areas upstream during the heavy downpour. Beyond noting with satisfaction the present campaign by Government to "Keep Hong Kong Clean" we have nothing to say about the construction aspects related to this fatality.

(v) Shau Kei Wan

293. Three separate incidents occurred in this area involving demolition of two huts with consequent loss of life, and one drowning fatality. Both huts were built very close to the foot of an abandoned quarry face without due regard to the danger of landslips and falling boulders. With regard to the drowning fatality our comments on the Chai Wan incident also apply here.

(B) GENERAL CONCLUSIONS

(a) Hillside Excavation

294. Based on the evidence before us and on our own expertise, we are in no doubt that any excavation or cutting made into the hillside slopes of Hong Kong carries with it an implied risk of a landslide occurring as a result of these operations, however small that risk may be. Among many factors which tend to aggravate the risk of collapse at any one particular site, mention must be made of the following:—

- (1) increasing area of cutting-face;
- (2) increasing angle of cutting-face with the horizontal;
- (3) increasing height of cutting-face;
- (4) inadequate support of cutting-face and
- (5) increasing time over which cutting-face is unsupported or inadequately supported.

(b) Consideration of Construction Operations

295. In Chapter II of this Report we pointed to the significance of the association of landslips with man-made excavations, cuttings and embankments. In all but one of the landslips which we have considered, such association was evident. There is no doubt in our mind that in each and every case examined human activities played some part in causing the landslips to occur.

(c) Seismicity

296. Evidence submitted to us showed that there was no significant earthquake tremor in Hong Kong during the period June 16–18, 1972. We find, accordingly, that earthquake shocks had no bearing on the landslips forming the subject matter of this Inquiry. Furthermore, based on the more general evidence on earthquake tremors experienced in Hong Kong, and presented to us, we do not consider that earthquake risk need be included in our general recommendations.

(d) Rescue Operations

297. We are of the view that all those who took part in rescue work, particularly the Fire Services, the Police and the Army merit commendation for the courage, zeal and efficiency with which they discharged their respective duties. We are satisfied that everything that could be done to rescue the victims and recover the dead in the shortest possible time was done by all rescue workers.

SECTION 2

RECOMMENDATIONS

(A) SAFETY OF SQUATTER AREAS

298. With reference to what we have said in paragraphs 236 and 237, we appreciate that because of the nature of the general topography of Hong Kong and the location of many squatter areas in relation to this topography, it would be an impossible task for Government to ensure the complete safety of these areas against the effects of landslips and rockfalls. Nevertheless, we *recommend* that both the Resettlement Department and the Public Works Department should continue to act on complaints about possible dangers in existing squatter areas. In addition, regular inspections of these areas should be made by experienced engineers to watch out for possible danger spots and to take action when necessary to alleviate such danger.

299. We appreciate that the frequency and the degree of thoroughness of such inspection depends on the manpower and other resources available, and we *recommend* that Government should consider increasing such resources of the relevant departments if necessary.

(B) LIGHTING EQUIPMENT FOR RESCUE WORK

300. In connection with rescue work, and with reference to what we have said in paragraph 146, we recommend that the Fire Services Department, the Public Works Department and the Royal Hong Kong Police Force be provided with connecting cables of adequate length to ensure that generators for heavy lighting equipment may be placed at a safe distance from an area affected by gas. This would also have the advantage of preventing the noise created by such generators from drowning possible victims' cries for help.

(C) BUILDING DEVELOPMENT

301. We are of the opinion that the risk of landslips in Hong Kong arises more from deficiencies in supervision and control of works than from deficiencies in design. Because of this we do not recommend the formation of a special panel of civil engineers who would be authorized to deal specifically with earthworks problems as

suggested by Mr. VAIL. Adequate expertise on such matters is already available in Hong Kong even though it may not be utilized to its fullest extent. We consider the control measures recommended below, if implemented properly, will provide adequate safeguards against recurrence of the disasters of June 1972.

(a) Abandoned Quarries, Rock Cuttings and Faces

302. Short of *recommending* that no one should be allowed to live at the foot of abandoned quarries, and, in particular, rock cuttings and faces which are badly fissured and show evident signs of water seeping through these fissures at various times, there is little we wish to say with regard to such hazardous areas.

(b) Underground Pipes

303. In all ground susceptible to settlement or soil creep we *recommend* that water service mains, particularly those carrying water under high pressure, should be constructed of materials which are not of a brittle nature and thus particularly liable to fracture arising from differential movement of the soil.

(c) Soil Engineering

304. We *recommend* the setting up of an appropriate unit of the Public Works Department as enunciated in Mr. VAIL's Recommendation No. 4 (Appendix V), and carrying the following responsibilities and duties:—

- (1) to carry out a geological and topographical study of those inhabited parts of the Colony in which landslips are likely to occur;
- (2) to conduct a comprehensive soil investigation of the potential landslip areas of the Colony determined from the study in (1);
- (3) to inspect regularly all potential landslip areas with particular regard to retaining walls, slope protection and the repair and maintenance of drainage channels and water courses;
- (4) to consider and implement any measures to improve the stability of dangerous hillsides overlooking populated areas;
- (5) to consider the site investigation and foundation proposals of prospective developers in all potential landslip areas;
- (6) to be empowered to ensure that all excavations in sloping areas are fully protected and are completed without delay;
- (7) to review the foundation design of all existing structures in potential landslip areas and recommend any improvements necessary;
- (8) to patrol on a 24-hour basis all potential landslip areas during periods of prolonged or intense rainfall and to advise the immediate evacuation of areas in danger.

(d) Modifications and New Leases

305. Where new leases or lease modifications, which calls for extensive site formation, are granted by Crown Lands and Survey Office, we *recommend* that, to ensure that site formation proceeds with the minimum of delay, a building covenant be incorporated in the terms and conditions of the lease or its modification which relates specifically to site formation.

(e) Enforcement and Maintenance

306. We accept the information contained in paragraph (7) of Circular Letter No. 27 (see paragraph 26) as a reasonable basis for design of cuttings pending the availability of additional information and techniques. We *recommend* its rigorous enforcement and, furthermore, we *recommend* that all such cutting work should be programmed by the authorized architect and approved by the Building Authority so as not to expose large and dangerous cutting faces during the accepted wet seasons.

(f) Land Policy

307. We *recommend*, irrespective of what has been recommended above, that Government immediately review its current land policy with a view to decentralizing the urban areas and utilizing some of the flat land in the New Territories for this purpose. This is to be preferred to further exploitation of hilly terrain involving large scale cuttings and excavations.

(g) Implementation

308. We appreciate that our recommendations involve an expansion of Government services by way of recruitment and training. We do not wish our recommendations to be deferred because of difficulties arising from these causes. We *recommend* therefore, that Government engages suitable expertise from outside sources on contract basis to ensure that no undue delays are encountered in implementing our recommendations.

CHAPTER VII

ACKNOWLEDGEMENTS

309. We would like to express our gratitude to all those members of the public who gave or offered to give evidence or statements, or otherwise provided photographs to assist us in our Inquiry. We would also like to thank the Honourable the Chief Justice for providing the place and staff for the public hearings.

310. We are particularly indebted to Mr. J. G. STEAN and his staff for the technical and historical evidence presented on Po Shan Road and Shiu Fai Terrace. This evidence was prepared comprehensively and systematically, and with admirable dispatch. Without it our work would have been greatly prolonged and made more arduous.

311. We cannot conclude our report without also paying tribute to our legal adviser, Mr. R. G. PENLINGTON, assisted by Mr. P. NGUYEN, and to all counsel and solicitors who appeared before us, for the care and thoroughness with which they presented and tested the evidence. Thanks are also due to our secretary, Mr. Y. C. MO, who has ably discharged his onerous duties with considerable conscientiousness and celerity.

T. L. YANG
Chairman

SEAN MACKAY

ERIC CUMINE

Y. C. Mo
Secretary

November 28, 1972

LIST OF PLATES

<i>Plate No.</i>	<i>Subject</i>
1	Aerial view of Po Shan Road area before 1962.
2	Aerial view of Tsuen Wan View (I.L. 2260) in 1961.
3	Aerial photograph of Po Shan Road area taken on May 24, 1970.
4	Aerial view of the Mid-levels in March 1972.
5	I.L. 2260 (51C & 51D, Conduit Road) before the disaster.
6	A close-up of the steel sheet piling at I.L. 2260.
7	Aerial view of Po Shan Road disaster area on June 20, 1972.
8	21, Po Shan Road on June 18, 1972 before the disaster.
9	Po Shan Road area at about 6 p.m. on June 18, 1972.
10	Kotewall Court and its vicinity on June 11, 1972.
11	Po Shan Road disaster area (same view as Plate 10).
12	The debris and rubble at Po Shan Road disaster site.
13	The landslip area at Shiu Fai Terrace (Wan Chai).



PLATE 1 ▲

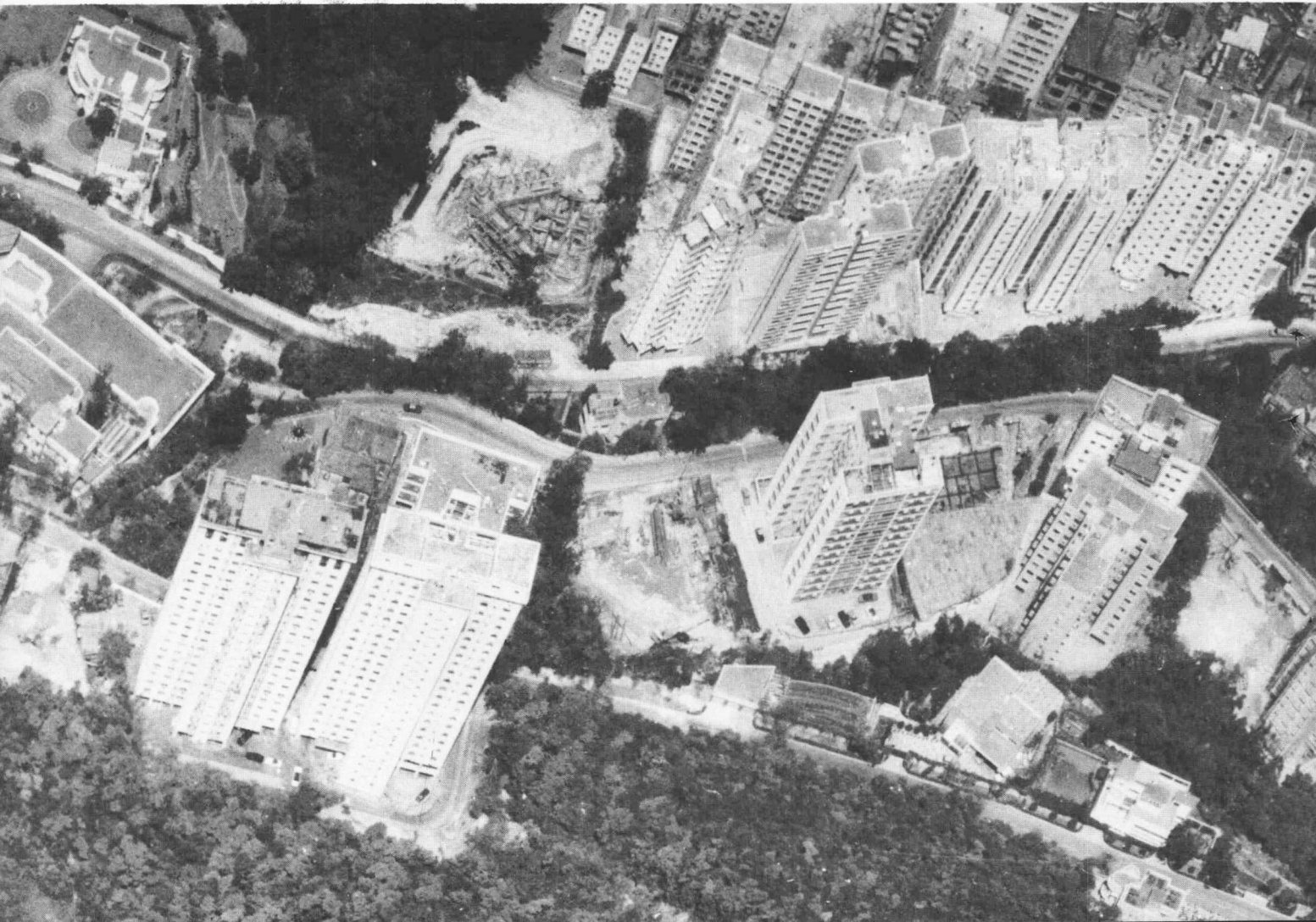
PLATE 2 ▼





PLATE 3 ▲

PLATE 4 ▼



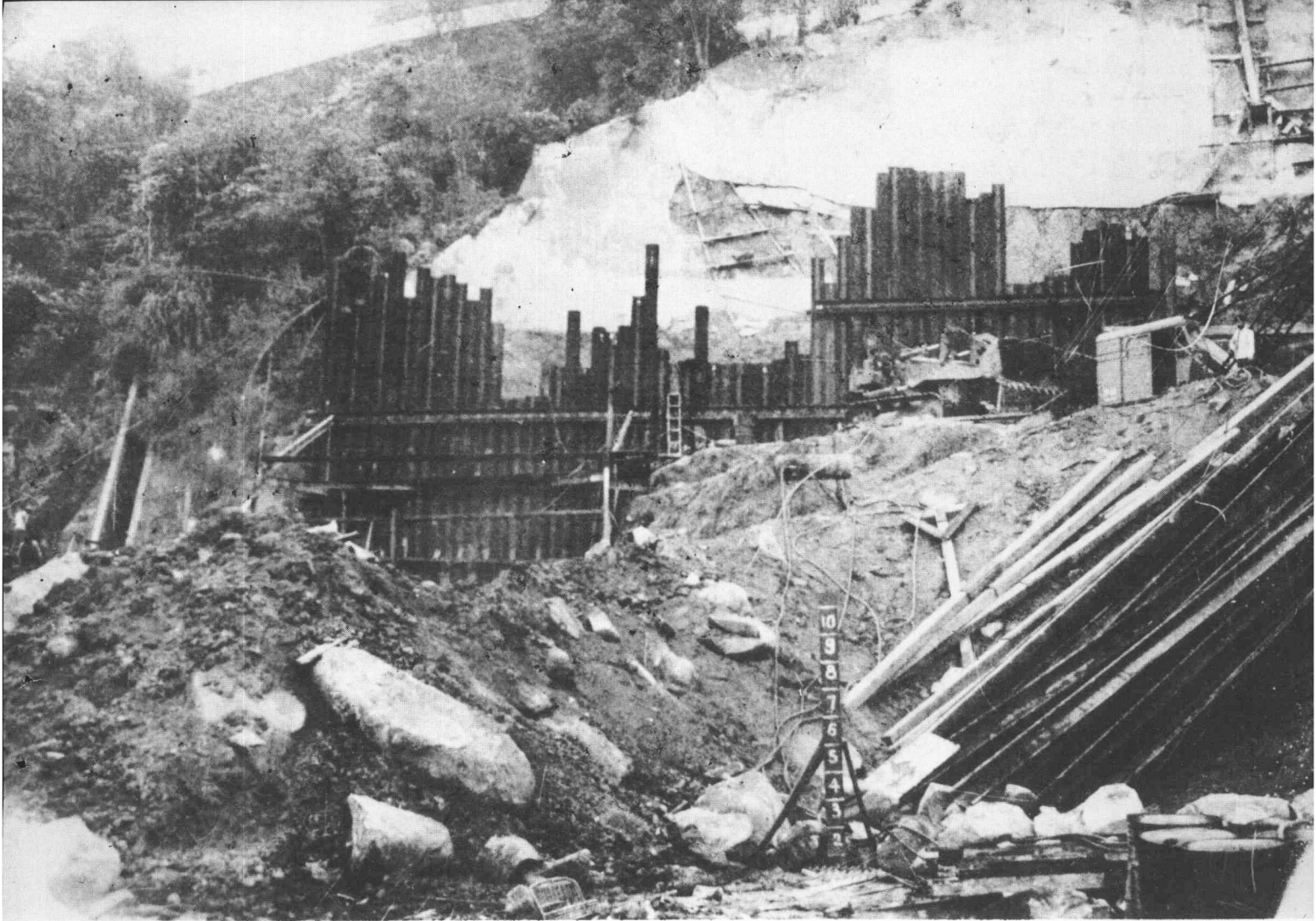


PLATE 5 ▲

PLATE 6 ▼

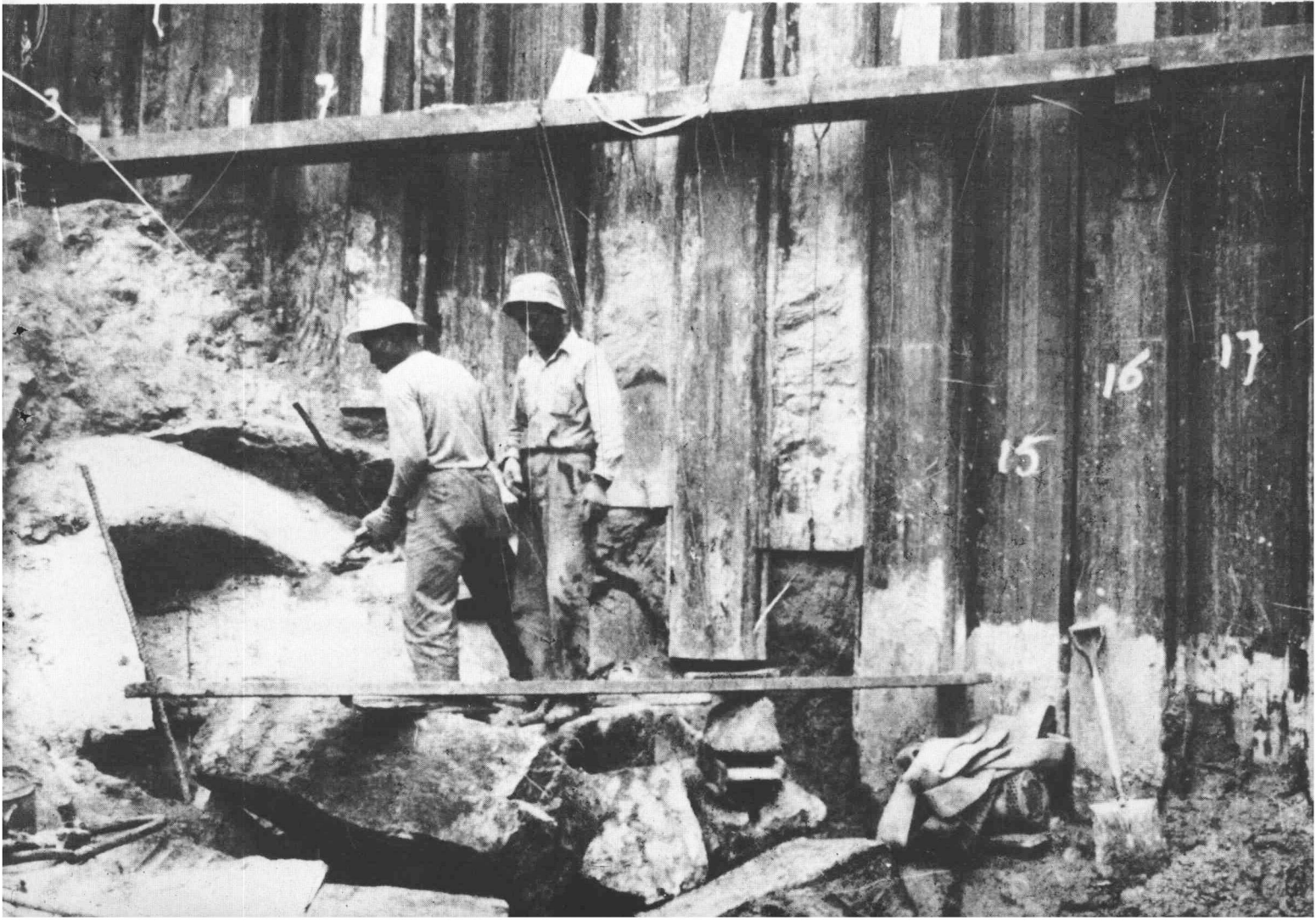








PLATE 8 ▲

PLATE 9 ▼





PLATE 10

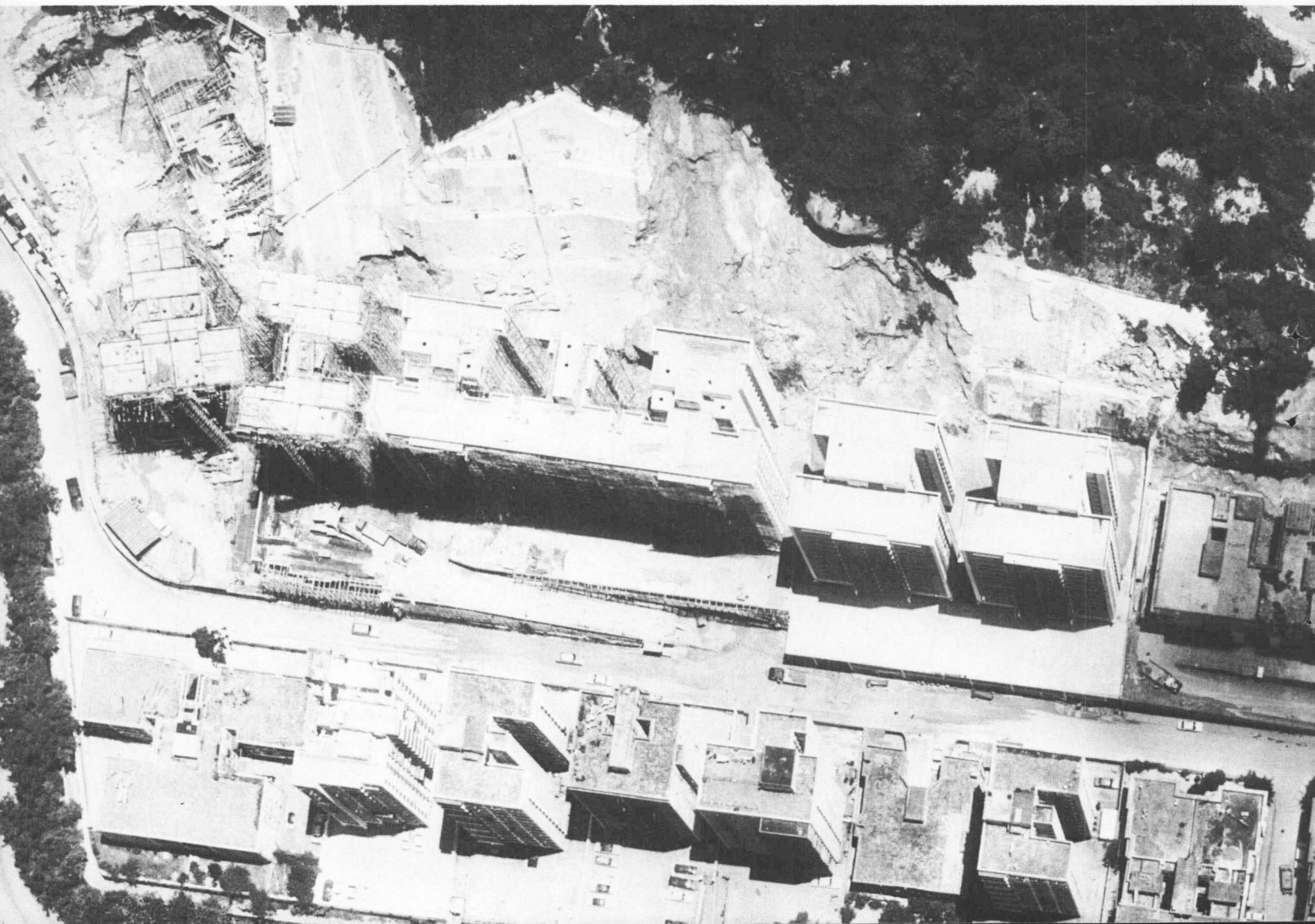
PLATE 11 ▼





PLATE 12 ▲

PLATE 13 ▼



INDEX TO APPENDICES

<i>No.</i>	<i>Content</i>	<i>Page</i>
I	List of witnesses	44
II	List of exhibits	45
III	List of persons/party who supplied or offered to supply photographs to the Commission .	47
IV	List of references	47
V	Report on the Po Shan Road landslip by Mr. A. J. VAIL	48
VI	Royal Observatory (1967) "The Thunderstorm and Heavy Rain Warning Service". Government Printer, Hong Kong	71
VII	Extracts of statements on the Po Shan Road disaster	74
VIII	List of fatal casualties in the rainstorm disasters	77
IX	Plan of the Po Shan Road disaster area	79
X	General information on emergency calls	80
XI	Statement of Mr. Terrence A. BERRECLOTH on the Po Shan Road disaster	81
XII	Statement of Mr. Guy Sanderson SHIRRA on the Po Shan Road disaster	82
XIII	The rescue of Mr. Henry LITTON	83
XIV	Remedial works performed after the Po Shan Road disaster	84
XV	Plan of Belcher's Street (Western District) area	85
XVI	Plan of Bullock Lane (Wan Chai) area	86
XVII	Plan of Shau Kei Wan area	87
XVIII	Sketch of Po Shan Road landslip by Mr. J. J. SCHOUSTRA	88
XIX	Sketch of Po Shan Road landslip by Mr. A. J. VAIL	89
XX	Sketch of Po Shan Road landslip by Mr. K. A. PHILLIPS	90
XXI	List of equipment used by the Fire Services	91

APPENDIX I
LIST OF WITNESSES

Witness No. *Name*
ON THE PO SHAN ROAD DISASTER

75	George William GOULDEN
76	A. STEVENSON-HAMILTON
77	Rab NAWAZ
78	LEUNG Fong-chee
79	YUEN Yu-choi
80	J. G. MANSELL
81	D. M. HOLDROYD
82	R. A. PORTER
83	K. P. CLARK
84	L. POWER
85	M. A. TURNER
86	G. S. SHIRRA
87	H. L. ELSWORTH
88	L. WORRALLO
89	F. JACKSON
90	M. K. LANE
53	KWAN Sai-yiu (recalled)
91	Lo Hing-cheung
92	A. S. CONWAY
93	CHEUNG Shu-shing
48	S. M. ELCOCK (recalled)
94	Lo Shiu-kuen
95	J. A. HIGGINS
96	A. T. W. DUNCAN
97	CHAN Chun-ying
98	G. FAIRHURST
99	A. J. VAIL
100	Ho Shiu-lai
101	SHUM Dai-chung
102	Dexter H. C. MAN
103	LEUNG Man-kwong
104	David AKERS-JONES
105	CHAN Yan-wing

ON THE INCIDENTS AT SHAU KEI WAN

46	CHENG Wu-chow (recalled)
----	--------------------------

APPENDIX II

LIST OF EXHIBITS

ON THE PO SHAN ROAD DISASTER

- 151.1 Statement of Chief Inspector G. W. GOULDEN (75)
- 151.2 Police record of emergency calls received during the rainstorms
- 152.1 Statement of Senior Inspector A. STEVENSON-HAMILTON (76)
- 152.2 Police record on David J. ROADS' (65) emergency call
- 152.3 Police record on David J. ROADS' (65) emergency call
- 153. Statement of Senior Inspector Rab NAWAZ (77)
- 154. Statement of Senior Inspector LEUNG Fong-chee (78)
- 155. Statement of Sergeant YUEN Yu-choi (79)
- 156. Statement of Superintendent J. G. MANSELL (80)
- 157. Statement of Superintendent D. M. HOLDROYD (81)
- 158.1 Statement of Superintendent R. A. PORTER (82)
- 158.2 Photostat copy of photograph of light projector used by the Police
- 158.3 Photostat copy of photograph of portable generator used by the Police
- 158.4 Photostat copy of photograph of portable blinker used by the Police
- 159. Statement of Superintendent K. P. CLARK (83)
- 160. Statement of Superintendent L. POWER (84)
- 161. Statement of Superintendent M. A. TURNER (85)
- 162. Statement of Sergeant LAI Wai-chi
- 163. Statement of Police Constable 7411 YAU Fuk-tsang
- 164. Statement of Senior Inspector AU YEUNG Chun
- 165. Statement of Company Commander E. F. TAYLOR (Police)
- 166. Statement of Senior Inspector G. S. SHIRRA (86)
- 167.1 Statement of Senior Divisional Officer H. L. ELSWORTH (87) (Fire Services Department)
- 167.2 Record of disaster alarms of Fire Services Department
- 168.1 Statement of Assistant Chief Fire Officer L. WORRALLO (88) (Fire Services Department)
- 168.2 Recorded messages received by the Fire Services Department during the rainstorms
- 169.1 Statement of Acting Chief Fire Officer F. JACKSON (89) (Fire Services Department)
- 169.2 Statement of Acting Chief Fire Officer F. JACKSON
- 170. Statement of Acting Deputy Director M. K. LANE (90) (Fire Services Department)
- 171.1 Statement of Assistant Divisional Officer KWAN Sai-yiu (53) (Fire Services Department)
- 171.2 Statement of Assistant Divisional Officer KWAN Sai-yiu
- 171.3 Statement of Assistant Divisional Officer KWAN Sai-yiu
- 172. Statement of Assistant Divisional Officer Lo Hing-cheung (91) (Fire Services Department)
- 173. Statement of Assistant Station Officer KWONG Wai-hon (Fire Services Department)
- 174. Statement of Station Officer LEE Cho-yau (Fire Services Department)
- 175. Statement of Assistant Station Officer LEE Kam-cheung (Fire Services Department)
- 176. Statement of Station Officer LEUNG Kwok-chiu (Fire Services Department)
- 177. Statement of Acting Divisional Officer LIU Jun-pei (Fire Services Department)
- 178. Statement of Assistant Station Officer WONG Yau-to (Fire Services Department)
- 179. Statement of Divisional Officer A. S. CONWAY (92) (Fire Services Department)
- 180. Statement of Divisional Officer CHEUNG Shu-shing (93) (Fire Services Department)
- 181. Statement of Divisional Officer S. M. ELCOCK (48) (Fire Services Department)
- 182. Statement of Station Officer Lo Shiu-kuen (94) (Fire Services Department)
- 183. Statement of Acting Divisional Officer J. A. HIGGINS (95) (Fire Services Department)
- 184. Statement of Assistant Divisional Officer CHAN Fong (Fire Services Department)
- 185. Statement of Assistant Station Officer CHIU Hung-wai (Fire Services Department)
- 186. Statement of Assistant Station Officer CHOW Kai-leung (Fire Services Department)
- 187. Statement of Station Officer LAM Chung-fong (Fire Services Department)
- 188. Statement of Station Officer LEUNG Shiu-kay (Fire Services Department)
- 189. Statement of Assistant Divisional Officer TAI Chun-lan (Fire Services Department)
- 190. Statement of Acting Assistant Divisional Officer TSUI Hin-king (Fire Services Department)
- 191. Statement of Station Officer Peter YEUNG (Fire Services Department)
- 192.1 Statement of Assistant Divisional Officer Ho Kwok-wah (54) (Fire Services Department)
- 192.2 Statement of Assistant Divisional Officer Ho Kwok-wah
- 193. Statement of Major A. T. W. DUNCAN (96)
- 194. Statement of Acting Chief Staff Officer CHAN Chun-ying (97) (Civil Aid Services)
- 195. Supplementary statement of Divisional Officer A. S. CONWAY (92) (Fire Services Department) (see also Exhibit No. 179)
- 196. Supplementary statement of Assistant Divisional Officer KWAN Sai-yiu (53) (Fire Services Department) (see also Exhibit No. 171.1)
- 197. Supplementary statement of Assistant Station Officer KWONG Wai-hon (Fire Services Department) (see also Exhibit No. 173)

Appendix II—Contd.

- 198. Supplementary statement of Assistant Divisional Officer Lo Hing-cheung (91) (Fire Services Department) (see also Exhibit No. 172)
- 199. Supplementary statement of G. F. HOGG (72) (Public Works Department) (see also Exhibit No. 138)
- 200. Report of A. J. VAIL (99) on the Po Shan Road landslip
- 201. Statement of W. L. T. CRUNDEN (Public Works Department)
- 202. Statement of Frederick Peter FONG
- 203. Statement of Joseph M. DAILEY
- 204. Supplementary statement of K. C. BRIAN-BOYS (74) (Public Works Department)
- 205.1–18 Photographs of I. L. 2260
- 206. Statement of CHAN Yan-wing (105)
- 207. Statement of LEUNG Man-kwong (103)
- 208. Statement of Ho Shiu-lai (100)
- 209.1 Statement of Dexter H. C. MAN (102)
- 209.2 Supplementary statement of Dexter H. C. MAN
- 209.3 Advertisement on Harvest Court
- 209.4 Brochure on Harvest Court
- 210. Statement of SHUM Dai-chung (101)
- 211. Further statement of K. C. BRIAN-BOYS (74) (Public Works Department)
- 212.1 List of those killed at Kotewall Road and other areas
- 212.2 Police statement on the fatal casualty in a demolished hut in the Po Shan Road disaster
- 213.1 Letter from the Commission's legal adviser to Mr. G. FAIRHURST, Hong Kong & China Gas Co., Ltd.
- 213.2 Reply from Mr. FAIRHURST to the Commission's legal adviser
- 213.3 Sketch on gas supply system prepared by Mr. FAIRHURST
- 213.4 Plan of gas pipe layout prepared by Mr. G. FAIRHURST
- 213.5 Further letter from Mr. FAIRHURST
- 214. Scale sketch by A. J. VAIL (99)
- 217. P. LUMB's comments on A. J. VAIL's report (Exhibit 200)
- 218. C. L. So's comments on A. J. VAIL's report (Exhibit 200)
- 219.1 Approval of plans for I.L. 2260 issued by the Building Authority
- 219.2 Consent to the commencement and carrying out of building works at I.L. 2260 issued by the Building Authority
- 219.3 Approval of plans for I.L. 2260 issued by the Building Authority
- 220. Letter from NG Chun-man
- 221. Memorandum from Colonial Secretariat to the Commission's legal adviser enclosing a statement from the Director of Lands and Survey
- 222.1–3 Photographs of I.L. 2260
- 223.1 Record of injuries submitted by Queen Mary Hospital
- 223.2 Record of injuries submitted by Tang Shiu Kin Hospital
- 224. Supplementary statement of Chief Fire Officer F. JACKSON (89)
- 225. A Bill to further amend the Buildings Ordinance
- 226.1 Report on the investigation of the building collapse at 38–40, Kotewall Court
- 226.2 Comments on the structural aspects of the building collapse at 38–40, Kotewall Court
- 226.3 Album containing photographs of the disaster site
- 227. Supplementary statement of A. J. VAIL (99) (see also Exhibit 200)
- 231. Report from J. J. SCHOUSTRA
- 233. Letter from Raymond Y. K. KAN on Kotewall Court

ON THE INCIDENT AT SHIU FAI TERRACE (WAN CHAI)

- 215. Report from J. J. SCHOUSTRA
- 216. Report from Scott Wilson Kirkpatrick and Partners
- 228. Letter from Scott Wilson Kirkpatrick and Partners (see also Exhibit 216)
- 230. Further statement from Scott Wilson Kirkpatrick and Partners
- 232. Further report from J. J. SCHOUSTRA

ON METEOROLOGICAL DATA

- 229. Further statement from G. J. BELL (1)

APPENDIX III

LIST OF THE PERSONS/PARTY WHO SUPPLIED OR OFFERED TO SUPPLY PHOTOGRAPHS TO THE COMMISSION

- | | |
|-------------------------|-----------------------------------|
| 1. CHAN Tak-shun | 11. South China Morning Post Ltd. |
| 2. E. M. CRAWFORD | 12. Henry STEINER |
| 3. P. A. DAVIES | 13. Clifford K. K. SUN |
| 4. Alex K. Y. LEE | 14. J. M. TABERNACLE |
| 5. Kenneth LOO Pok-wing | 15. Mrs. Joan TEMPLEMAN |
| 6. Miguel de MARTINI | 16. S. C. THOMPSON |
| 7. F. C. MERRILL | 17. Edward VISSER |
| 8. Fernie PEREIRA | 18. Conway C. W. WONG |
| 9. Gerhard F. SIMMEL | 19. Walter C. S. YEN |
| 10. Michael SMITHIES | |

APPENDIX IV

LIST OF REFERENCES

1. Paragraph 16.
MOYE, D. G. (1955), Engineering Geology from the Snowy Mountains Scheme. Journal of Institute of Engineers, Australia, vol. 27.
2. Paragraph 28.
BULMAN, J. N. (1968), A Survey of Road Cuttings in Western Malaysia. Proceedings of the Southeast Asian Regional Conference on Soil Engineering, March 1968.
3. Paragraph 29.
BINNIE, DEACON & GOURLEY, Government of Hong Kong Full Report on the Plover Cove and Hebe Haven Water Scheme. Vol. II Report on Geological Investigations. Scott Wilson Kirkpatrick and Partners, Hong Kong.
4. Paragraph 32.
BELL, G. J. & CHIN, P. C. (1968), The Probable Maximum Rainfall in Hong Kong. Government Printer, Hong Kong.
5. Paragraph 32.
CHEN, T. Y. (1969), Supplement to Meteorological Results, 1966—The Severe Rainstorms in Hong Kong during June 1966. Government Printer, Hong Kong.
6. Paragraph 32.
LAU, C. K. (1972), Seismicity of Hong Kong. Royal Observatory, Hong Kong.
7. Paragraph 38.
LUMB, P. (1962), Effect of Rain Storms on Slope Stability. Symposium on Hong Kong Soils. H.K. Joint Group of Institutes of Civil, Mechanical, and Electrical Engineers.
8. Paragraph 40.
SO, C. L. (1970), Mass movements associated with the rainstorm of June 1966 in Hong Kong. Reprinted from Transactions, July 1971 Publication No. 53, The Institute of British Geographers.

APPENDIX V
A REPORT ON THE PO SHAN LANDSLIDE

BY
A. J. VAIL

THE COMMISSION OF ENQUIRY
INTO
THE RAINSTORM DISASTERS OF JUNE 1972

* * *

A REPORT ON THE PO SHAN LANDSLIDE

BY
A. J. VAIL, B.Sc., F.I.C.E., F.I.W.E., F.I.E.(M).
of Binnie & Partners, Consulting Engineers

for and on behalf of
THE PUBLIC WORKS DEPARTMENT
GOVERNMENT OF HONG KONG

SEPTEMBER 1972

CONTENTS

PART 1.	Introduction
PART 2.	The Geotechnical Problems of Hong Kong
PART 3.	The Stability of Natural Earth Slopes
PART 4.	The Events Leading to the Po Shan Landslide
PART 5.	The Nature of the Slip
PART 6.	The Cause of the Po Shan Landslide
PART 7.	The Prevention and Control of Landslides
Appendix A.	A Brief Description of the Geology of Hong Kong by D. J. EASTAFF
Appendix B.	Logs of Boreholes in the Po Shan Hillside
Figure 1.	Typical Profile of Hillsides in Areas of Volcanic Rock
Figure 2.	The Stability Analysis of Slopes
Figure 3.	A Plan of the Po Shan Area
Figure 4.	A Section through the Po Shan Landslide Area
Figure 5.	Grading Curves of Decomposed Volcanic Rock

Appendix V—Contd.

INTRODUCTION

On 24th July 1972 Binnie & Partners (Hong Kong) were asked by the Acting Director of Public Works to provide specialists to advise on the technical aspects of the Po Shan Road landslide.

On 26th July I arrived in the Colony and was joined on 27th by Mr. D. J. EASTAFF, Chief Geologist of Binnie & Partners, Westminster.

We flew over the area of the landslide by helicopter with representatives of the Public Works Department and later toured the site on foot.

On the following days we had discussions with the P.W.D. and I prepared a Preliminary Report for the Director of Public Works, recommending certain short term and long term remedial measures.

Mr. EASTAFF left the Colony on 29th July but before his departure he prepared a brief description of the geology of Hong Kong for the preliminary report and this is attached as Appendix A to this present report. Following further discussions at P.W.D. Headquarters I was asked to prepare for the Commission of Enquiry into the Rainstorm Disasters of June 1972, a report on the causes of the Po Shan landslide and the measures necessary to prevent similar disasters.

In order to prepare this report I have read the relevant sections of the transcript of evidence presented so far to the Commission and have studied the borehole logs, samples collected and the results of soil tests carried out by the P.W.D. in the area of the slide and the hillside above.

THE GEOTECHNICAL PROBLEMS OF HONG KONG

In order to understand the geotechnical problems of Hong Kong it is necessary to study the geology of the Colony and the manner in which the igneous rocks of which it consists are decomposing.

The Geology of Hong Kong has been discussed by P. LUMB (1965)* and a further brief description by D. J. EASTAFF is appended to this report. Figure 1 shows diagrammatically a section typical of many parts of Hong Kong Island and the New Territories.

The decomposition of the rock, which occurs at the surface and along joint planes, produces silty and clayey material containing many boulders at an earlier stage of decomposition and, near the peaks of the hills, these tend to creep down the face of the parent rock as colluvium (slopewash) to take up more stable slopes in or near the sea.

The slope of the hillsides formed by the insitu decomposition of the bedrock and the overlying colluvium from the peaks can be as steep as 36° from the exposed fresh rock of the peaks to a level of approximately 500 ft P.D. and at this level there is a well defined change of slope to about 18°.

The process of decomposition of the igneous rocks is continuing through geological time as is the migration of the colluvium down the hill slopes towards the sea. By the very nature of the process, colluvium is potentially unstable and it follows that any disturbance of the slope or any unusually severe conditions will accelerate the process of migration. Evidence of this in the form of slips in the hillsides has been apparent since the Colony was first inhabited.

THE STABILITY OF NATURAL EARTH SLOPES

The stability of any natural slope in soil is affected by three main factors:

- (1) The angle of the slope.
- (2) The degree of saturation of the soil.
- (3) The pore water pressure within the slope.

The effect of these factors can perhaps best be illustrated by examining the stability of an idealized slope as shown in figure 2.

The mode of failure of a homogeneous slope approximates to a rotational slip which is three dimensional in nature but which is illustrated here for simplicity in two dimensions.

If we consider an element of soil of unit weight W distant x from the centre of the potential slip circle being examined we can say that the disturbing moment of that element is being resisted by the shear strength of the soil along the base of the element multiplied by the distance R of that surface from the centre of the circle.

Neglecting the forces between the elements of soil making up the slice, which are secondary, one can also state that the factor of safety of the slope against failure *along this particular circle* will be

$$F = \frac{\sum SR}{\sum Wx}$$

Where S is the Shear Strength of the soil in the Coulomb equation:

$$S = C + W(1 - r) \tan \phi$$

and:

C = Cohesion of the soil

r = Pore pressure ratio at the failure surface

ϕ = Angle of internal friction of the soil.

* "The Residual Soils of Hong Kong" P. LUMB Geotechnique June 1965.

Appendix V—Contd.

Examining this equation, we can see that, in a cohesionless material such as a clean sand where $C=0$, the shear strength S depends entirely upon W and as this increases linearly with depth the factor of safety depends only upon the angle ϕ or, in other words, the radius of the circle becomes infinite and the stability of the slope is independent of height. This is demonstrated by a pile of sand which fails by surface sloughing and has constant side slopes regardless of the height of the pile.

In a cohesive material where $\phi=0$, the shear strength depends entirely upon the cohesion and as this is independent of depth, the failure circle will have a very small radius and the stability of the slope will depend upon its height. This explains why a 20 feet high slope in clay might be stable where a 40-foot slope in the same material would not.

In nature, most soils have both cohesion and internal friction and this is certainly true of the residual soils of Hong Kong which are variable. Soils derived from the volcanics have rather less shear strength than those derived from the granites.

The actual shape of natural slip surfaces will rarely be circular but will be affected by the fact that no soils are in fact homogeneous and will fail along weaker planes and in weaker zones.

The effect on the stability of a slope of the three factors, slope, saturation and pore pressure can be readily seen from figure 2:—

As the angle of the slope increases, so the summation of the disturbing moments Wx increases and the factor of safety is reduced.

An excavation at the foot of a slope will not only effectively increase the slope by altering the inclination of the incipient failure surface but will reduce the distance over which S can act, again reducing the factor of safety.

The residual soils in Hong Kong are, for the most part of the year unsaturated to great depth and, as their porosity can be as high as 50% (LUMB 1965), the degree of saturation is markedly affected by rainfall and especially by continuous or heavy rain which may eventually saturate the entire soil mass.

The degree of saturation of the soil increases W but since water induces a neutral stress there is no corresponding increase in S . Therefore, again F decreases.

In addition to this effect, LUMB (1965) has shown that the cohesion of the residual soils of Hong Kong, particularly those derived from the Rhyolites, drop rapidly with increase in the degree of saturation to zero or a very small value when saturation is reached and this again leads to a decrease in shear strength.

The pore pressure within a slope can be increased by water emerging from the bedrock beneath the slope or by finding its way into relatively pervious strata or zones within the overburden from points of entry at higher levels. Such water can exert very high pressures and unless this pressure is relieved it can lift the entire slope.

The pore water pressure (r) induced in the soil along the incipient failure plane, effectively reduces the W term in COULOMB'S equation once again reducing the factor of safety.

THE EVENTS LEADING TO THE PO SHAN LANDSLIDE

The events leading up to the catastrophic landslide of the 18th June are well known to the Commission but it would be convenient to summarise them here giving the sequence reported in the evidence of the witnesses to date and referring to figure 3:

1971	An unspecified number of slips in the southern face of the excavation in I.L. 2260 above Conduit Road.
August 1971	An extensive slip along the south slope of I.L. 2260 noted immediately after typhoon "Rose".
September 1971	Haircracks in the Po Shan Road opposite No. 21. "Earth movement" in the vicinity of 21, Po Shan Road.
November 1971	The face of the excavation in I.L. 2260 appeared wet and water was seen emerging at formation level.
January 1972	"Clear evidence" of movement in the slope between 21, Po Shan Road and Skyline Mansion.
March 1972	Excavation and driving of steel sheet piles commenced in I.L. 2260.
April 1972	Excavation and sheet piling continued and trench excavation for a retaining wall foundation began. The Contractor erected a rain cover over the works.
May 1972	Excavation and steel sheet piling continued.
June 1972	Excavation and steel sheet piling continued.
15th June 1972	Intermittent heavy rain commenced.
16th June 1972	Cracks were noted in Po Shan Road between No. 21 and No. 8.
17th June 1972 a.m.	A slip occurred over the width of the cut slope at the south face of I.L. 2260 carrying away most of the rain cover and distorting the sheet piling. The northern half of Po Shan Road and the garden terrace and garage of No. 21 settled some 6 feet. A fall occurred onto the Po Shan Road from the hillside above, which increased during the morning. The slope above Skyline Mansion began to break up and water was seen emerging from it.
17th June 1972 p.m.	At 12.45 a heavy rainstorm began and flow from the slope above Skyline Mansion increased considerably. The garden terrace and garage of No. 21, together with the northern half of Po Shan Road continued to sink to 10 to 15 feet below original level. The access road leading to No. 47, Conduit Road below Skyline Mansion exhibited signs of pressure from the overlying slope.

Appendix V—Contd.

Operations commenced to divert existing water courses from the area between 21, Po Shan Road and 53, Conduit Road to the west of I.L. 2260.

The water supply mains serving the area were closed at 4.00 p.m.

Large quantities of water were flowing along Po Shan Road and down the slope into I.L. 2260 from the nullah to the east of No. 21 and directly from the hillside.

The retaining wall below 21, Po Shan Road fractured and sank overnight and the fill under the house settled considerably.

18th June 1972 a.m. Sheet piling in I.L. 2260 continued to distort.

The northern part of Po Shan Road, the terrace and garden of No. 21 continued to settle.

The access road to No. 47 Conduit Road was blocked by rocks and soil and the slope above continued to creep.

18th June 1972 p.m. Po Shan Road terrace and garden continued to sink and to tilt.

The parapet of the retaining wall under No. 21 collapsed. At about 5 p.m. a large slip occurred at the junction of the south and west faces of the excavation in I.L. 2260 and flowed across Conduit Road demolishing the rear wall of 11, Kotewall Road.

At about 9 p.m. the hillside above I.L. 2260 failed catastrophically.

THE NATURE OF THE SLIP

Within 36 hours of the landslide, the Public Works Department began short term remedial measures by cutting and lining two catchwater drains in the hillside above the slip to divert surface water from the face. They later began excavating and removing slipped material from Conduit Road and the adjacent area and demolished those boulders brought down by the landslide which offered further immediate danger.

They also continued to divert all surface water drainage from the affected area, an operation they had begun on 17th June.

On 1st July the Department began work on a programme of percussion boring and rotary drilling through the material that had slid into the excavation and into the undisturbed ground beneath in I.L. 2260 and along Po Shan Road on both sides of the slip. They commissioned an aerial survey of the affected area and prepared sections through the area showing the profile of the ground both before and after the landslide.

Samples taken from the boreholes driven into the material from the slip lying in the excavated area of I.L. 2260 show clearly the texture of the volcanic rock and this has led me to the conclusion that the major slide from above came down as a comparatively undisturbed wedge.

Examination of the sections through the hillside taken both before and after the slide and reproduced in figure 4, indicates a slip of an average thickness, on this particular section, of about 30 feet and a maximum thickness as yet unknown but which in all probability is in excess of 60 feet assuming a failure surface passing through the base of the deep cutting in I.L. 2260. The volume of material involved in the landslide based on this assumption would be of the order of 50,000 cubic yards.

The approximate length of the slipped area is 360 feet and it can therefore be described as relatively shallow rather than deep seated and is the type of slip normally associated with a silty rather than a clayey material.

As the whole area into which this wedge of earth slid was saturated and in a loose condition and as the material in the wedge itself must have been near saturation point the contact zone between the hillside material and the lower slopes must have been liquefied or at least in the form of a slurry and this would have increased considerably the distance which the slipped material travelled before coming to rest.

I understand that a considerable quantity of water was seen emerging from the face of the slipped hillside for some days after the landslide occurred and this strongly suggests a build up of water pressure in deep relatively pervious strata in the colluvium.

THE CAUSE OF THE PO SHAN LANDSLIDE

It is evident from the record of events that a number of unfavourable circumstances combined to produce a condition of instability in the area:

- (1) The slope and nature of the material in the hillside.
- (2) The almost unprecedented rainfall that occurred in May and June of 1972 culminating in the storm of 16th, 17th and 18th June.
- (3) The deep cutting in I.L. 2260.

Other factors which may or may not have had an effect are:

- (4) The design and construction of 21, Po Shan Road.
- (5) The design and construction of the terrace garden and garage adjoining 21, Po Shan Road.

The hillside above Po Shan Road is derived from volcanic rock and is covered by a mantle of colluvium. It is typical of slopes in this part of Hong Kong Island under Victoria Peak, is among the steepest of these and forms a marked ridge clearly discernible from the air. A topographical survey has indicated that below a level of 900 feet PD it has an overall slope of 36° and that this slope meets the less steep 18° coastal slope on or near the centre of I.L. 2260.

Appendix V—Contd.

Three boreholes sunk in the hillside immediately above the slipped area have revealed clayey material about six feet in thickness in some places overlying clayey silt containing boulders and overlying, in turn, volcanic rock at depths between 60 and 90 feet. There are also a number of boulders on the surface of the hillside which, it appears from their size, have broken off from the summit.

The logs of these boreholes, shown at Appendix B, indicate that the weathered material in the hillside is very silty with sand near decomposing boulders and bedrock. Grading curves of material taken from boreholes in the slipped material lying in I.L. 2260 and probably similar to that in the remaining hillside are shown in Figure 5 to this report. They reveal only 10% of clay and a further 30% of silt and lie within the zones of grading published for decomposed volcanics by LUMB (1965).

It is significant to note that the sandier layers at depth in the hillside being relatively permeable could provide seepage paths for water to percolate to the lower levels and that these could, in times of prolonged rainfall, be under considerable pressure.

The commission has heard evidence of unusually heavy and prolonged rainfall from 1st May 1972 until the date of the landslide.

It has also heard that "the first occasion in 82 years when each of three consecutive days received more than 200 mm occurred on June 16th, 17th and 18th 1972".

These three days of intense and prolonged rainfall, together with the exceptionally high long term figures preceding them and the peak intensities reported on 17th and 18th June were without doubt the main factor contributing to all the slips that occurred during this period.

The effect on the moisture content of the hillsides of both direct precipitation and of water overflowing from the permanent drainage channels and nullahs is self evident but just as significant is the strong possibility of a build up in pore pressure in the material forming the hillsides by the increased quantity of water percolating from the bedrock into the decomposed overburden at higher levels.

Eye witnesses have reported seeing water emerging from the southern slope of the excavation in I.L. 2260 in drier times and from the slope above Skyline Mansion on 17th June. These reports confirm that there were underground sources of water and it is reasonable to assume that these sources would be increased in yield in such conditions of prolonged and heavy rainfall and, if relief was limited, they could have built up pressure within the overburden. The effect of saturation on the cohesion and density of decomposed volcanics has already been discussed.

There appear to have been a number of slips in I.L. 2260 following the excavation which started in May 1971. There is no doubt that the southern face of this excavation immediately below Po Shan Road having been left unprotected for nearly eight years until April 1972 would have softened progressively by exposure and by the emergence of water from its face. The latest operation commenced in March 1972 and never completed, which involved further excavation of the southern face, could only have reduced the stability of the slope still further and it is not surprising that it did not survive the 1972 saturation with its consequent reduction in cohesion. I understand that the purpose of this additional excavation was to construct a retaining wall and to protect this high face with masonry. Had this work been completed as was scheduled, by the end of April 1972, the stability of the face would have been improved since it would have been, in some measure, supported.

I have read no evidence of slips into the excavation in I.L. 2260 from the access road into Mirror Marina or the adjacent covered channel, both lying to the east and I therefore find no evidence to suggest that the deterioration of the slope between house No. 21, Po Shan Road and Skyline Mansion was caused by the excavation in I.L. 2260.

It is my opinion that, while the hillside above Po Shan Road was already in an unstable condition—demonstrated by the falls onto Po Shan Road on 17th June—the excavation in I.L. 2260 was responsible for the location and magnitude of the 9 p.m. landslide and for its catastrophic mode of failure since the excavation effectively removed the toe of this section of the hillside.

No. 21, Po Shan Road was constructed in 1964 at the level of Po Shan Road on a framework of reinforced columns and beams supported by insitu bored piles driven to an average depth of 70 feet below ground floor level, not to bedrock but to what is described in a piling drawing as "hardpan".

In order to create access and a parking area between the house and Po Shan Road, fill was placed to the south of and under the house and this was contained to the north and west of the house by a mass concrete retaining wall.

During the prolonged rainfall which commenced on 15th June a considerable quantity of surface water flowed along Po Shan Road from the east and this may well have saturated the fill beneath No. 21. On the night of the 17th/18th June the retaining wall fractured and sank and the fill under the house settled appreciably. This did not occur however until after the hillside between No. 21, Po Shan Road and Skyline Mansion had begun to slip and I am therefore led to the conclusion that the retaining wall failed because it was located within a slip failure occurring at a lower level below the house and was not simply pushed over by the fill under the house. The wall was massive in construction and retained behind it an appreciable depth of fill which, when weakened by saturation, would have increased the disturbing moment created by its own weight and that of the wall and could have caused the slip.

The upper limit of the slip failure appears to be just north of the northern face of the house, which remains apparently undamaged, and the slip cannot be said to have triggered off the major landslide above Po Shan Road.

It has been suggested that the terrace garden and garage in the extension of 21, Po Shan Road contributed to the landslide. While these may appear to be massive structures, the terrace garden was piled to depths of about 50 feet and the garage was on spread footings. I am advised that the total weight of the garage was 224 tons and that the footings covered an area of 331 square feet. The bearing pressure on these footings was therefore almost exactly two thirds of a ton per square foot. The plan area of the building was about 1,200 square feet so that its total load on the ground can be said to have been equivalent to a little under three and a half feet of earth. I consider therefore that the contribution of these structures to the instability of the area they were constructed on was not significant.

Appendix V—Contd.

To Summarize: I am of the opinion that:

- (1) The slope between 21, Po Shan Road and Skyline Mansion slipped progressively due to saturation by rainfall and surface water and to an increase in pore pressure in the slope.
- (2) The southern face of the excavation in I.L. 2260 slipped progressively and later rather more drastically due to softening of the slope by long term exposure and by water emerging from within the slope.
- (3) The hillside above Po Shan Road slipped catastrophically due to softening by saturation and to an increase in pore pressure in the hillside combined with the effect of the removal of the major portion of the supporting toe below Po Shan Road and a reduction in strength of the remainder.
- (4) There is no obvious connection between the progressive slip below 21, Po Shan Road and above Skyline Mansion and the major landslide.
- (5) The effect of the construction of the garden terrace and garage adjoining 21, Po Shan Road on the stability of the hillside cannot be regarded as being of major significance.

THE PREVENTION AND CONTROL OF LANDSLIDES

Landslides of varying severity have always been a feature of life in Hong Kong and there is ample evidence of this to be seen from the air.

In the past, when intense development was confined to the coastal slopes and buildings were of a very limited height, these landslides were, for the most part, little more than a nuisance but today, as the availability of land becomes more restricted, landslides are becoming more and more a serious problem not only because development of the Mid Levels increases the probability of creating landslides but also because the greatly increased population and density of development can render the consequences of any such landslides extremely grave.

Since the geological processes of decomposition, transportation and deposition will continue, the stability of the hillsides will continue to decrease and further slips will occur whenever there are periods of prolonged or intense rainfall.

The deterioration of the hillsides can be retarded in selected areas by civil engineering means:

Slopes can be protected from increased saturation by the provision of surface drainage and of relatively impermeable surface membranes.

The build up of pore pressure within the slopes can be prevented, or at least alleviated, by the provision of internal drainage from bores or adits and the gradients of the hillsides can be effectively reduced, in some places, by the construction of retaining walls, toe weights or tie-back structures.

These remedies require not only direct expenditure in civil engineering works but also in some cases, the purchase of land or the denial of its use for other purposes and it would be for the developers concerned and their technical advisers to determine the economics of the remedial measures in each case.

Many future slips would be prevented and others controlled if developers and their technical advisers were made aware of the nature of the geotechnical problems of Hong Kong and of the dangers inherent in developing in the Mid Levels and other steep areas of the Colony.

I understand that, under the present building regulations, prospective developers are required to engage an Authorized Architect to design their structures and no approval can be given unless such an architect has signed the drawings.

There is however, no requirement for an Authorized Engineer to investigate or design the foundations for these structures or to consider the short and long term stability of the construction sites.

It is a regrettable fact that developers, the world over, are reluctant to spend their money on foundation exploration or design because they receive no visible asset for such expenditure which can be utilized to generate income. In some cases these developers place their architects under considerable pressure to reduce expenditure on foundations, occasionally with tragic results.

Hong Kong with its geotechnical problems, restricted space and high population density presents civil engineering problems of unusual severity and I am of the opinion that all prospective developers should have the advice of engineers as well as of architects, and that they should be required to obtain such advice as a prerequisite to approval of their proposals.

A knowledge of soil mechanics and foundation engineering is not within the field of all civil engineers and if legislation requiring developers to engage authorized engineers is to be of practical value, it will be necessary for the Government to select, from the private sector, certain engineers qualified and experienced in this field for authorization and to afford the opportunity for others to acquire sufficient knowledge and experience to be considered for authorization in the future.

To this end, it might be of considerable benefit to run a part time post graduate course or series of lectures on soil mechanics and its particular application in Hong Kong and this could, perhaps, be done by the University of Hong Kong who have all the necessary expertise and facilities.

The Government itself can combat the problem of landslides by conducting further investigation of the nature of the geotechnical processes involved so that they can anticipate when and where future slips are likely to occur.

The geology of the Colony has been well defined by RUXTON* and others and it should be quite feasible for an appropriate Government Office to determine the limits of the decomposed granitic and volcanic rocks and, by relating them to existing or fresh

* B. P. RUXTON 1960 "The Geology of Hong Kong" Quart. Geol. Soc. London.

Appendix V—Contd.

land surveys, to decide which areas in the Colony are potential landslide areas, which of these pose the most severe risk and in which of them can preventive measures be economically implemented.

To complete this study, it would be necessary to carry out site investigation in the potentially unstable areas by boring, drilling, sampling and laboratory testing thereby building up a reservoir of information on the physical characteristics of each area and its response to rainfall. This work together with the programme outlined below would throw a very heavy additional burden on the present Offices in the Public Works Department and the Government might like to consider enlarging the appropriate Office or creating a new Specialist Office within the Department.

Armed with the information obtained from the study the Office would be in a position to monitor the dangerous areas on a year-round basis to detect at an early date any evidence of deterioration in the hillsides or in the natural or man-made drainage systems and to arrange for the construction of new drainage systems where those existing were inadequate or in a state of disrepair.

The Office would be in a position to study and comment on the foundation design proposals of any developer and to require of him not only an adequate site investigation prior to the commencement of construction but also a detailed programme of works. By this means the Office would ensure that nowhere were slips encouraged by unsupported and imprudent excavation or construction.

Where a proposed development is to be on a steep slope, the developer should be required to design a foundation for his structure which would impose no additional load on the ground below, e.g. by providing end bearing piles to rock.

There are a number of structures formed in the hillsides of the Colony which do appear to impose additional loads on the slopes below them and the Office should carry out a study of the foundations of all such structures and make recommendations for their improvement wherever necessary.

To function efficiently the Office should have powers to order the immediate cessation of construction where this is creating a hazard and the proper protection of construction sites against exposure. They should also be empowered to require all developers to satisfy them that their proposals would, at no time, increase the danger of a slip.

This last function of the Office would require of its officers a thorough understanding of soil mechanics and foundation engineering and to this end the staff should include at a high level, engineers experienced in this field*.

The Office should also be empowered to advise, without the delays necessitated by the present legislation, the evacuation of areas they consider in immediate danger and, while this sounds a formidable power, it should be remembered that in practice it would only have to be exercised during periods of prolonged or intense rainfall when the public, with the memory of the Po Shan disaster, would be conditioned to such precautions.

To summarize, I recommend that:

1. Prospective developers are required in future to submit to the Government site investigation data, foundation designs and construction proposals prepared by an Authorized Engineer.
2. A panel be formed of Civil Engineers with sufficient knowledge and experience to be authorized to prepare proposals for developers.
3. A post graduate course be instituted, possibly at the University of Hong Kong, to improve the knowledge of engineers on soil mechanics and foundation engineering and of the geotechnical problems of Hong Kong.
4. The appropriate Office of the Public Works Department:
 - (a) Carries out a geological and topographical study of those inhabited parts of the Colony in which landslides are likely to occur.
 - (b) Conducts a comprehensive soils investigation of the potential landslide areas of the Colony determined from the study in (a).
 - (c) Regularly inspects all potential landslide areas with particular regard to retaining walls, slope protection and the repair and maintenance of drainage channels and water courses.

* This point is made because of the apparent misconceptions of many developers (not only in Hong Kong but elsewhere) about the support and protection of slopes:

The function of a protective facing to an earth slope, such as the "chunam" used extensively in Hong Kong is to prevent rainwater from entering the face and softening it. It is, of course, essential at the same time to permit the drainage of water from the face and where water drains from well defined fissures in a rocky face this can be achieved by setting in weepholes at the points of emergence. Where the slope is of a soil at an advanced state of decomposition however, weepholes alone can be ineffective as pressure can build up between them and in this case it is necessary to provide a filtered protective face.

The function of a retaining wall in a natural slope is to support a slope by replacing the earth wedge that has been excavated. The common practice of building a wall away from the face and placing fill behind is not sufficient unless the wall is designed for and the backfill is compacted to, the "earth pressure at rest" condition as otherwise some movement of the slope behind the wall will occur until this condition is reached. This movement, especially in silty soils, may be sufficient to shear the soil which would not only increase the pressure on the retaining wall but would also create deep surface cracks into which water could percolate and soften the failure surface.

Again, some developers appear to have an incomplete appreciation of the necessity for drainage behind retaining walls and of the capacity of the foundations of these walls to withstand the forces involved.

Appendix V—Contd.

- (d) Considers and implements any measures to improve the stability of dangerous hillsides overlooking populated areas.
- (e) Considers the site investigation and foundation proposals of prospective developers in all potential landslide areas.
- (f) Is empowered to ensure that all excavations in sloping areas are fully protected and are completed without delay.
- (g) Reviews the foundation design of all existing structures in potential landslide areas and recommends any improvements necessary.
- (h) Patrols on a 24 hour basis all potential landslide areas during periods of prolonged or intense rainfall and advises the immediate evacuation of areas in danger.

I appreciate that many of the functions mentioned above were carried out by the Building Ordinance Office and the Highways Office of the Public Works Department with extreme efficiency during the intense rainfall between 15th and 18th June. I feel, however, that the Public Works Department should be given increased powers and the engineers with special qualifications and experience in soil mechanics to enable them to implement these recommendations.

A. J. VAIL
27th September, 1972

Appendix V—Contd.

APPENDIX A

A BRIEF DESCRIPTION OF THE GEOLOGY OF HONG KONG

BY D. J. EASTAFF, B.Sc.(GEOL).M.I.C.E.

There are two major rock types in Hong Kong and both of them are of igneous origin:

- (i) Granite
- (ii) Volcanics.

In addition, there are some metamorphosed sedimentary rocks but they cover only a small area of the Colony and they have no bearing on the present study.

The granitic rocks are younger than the volcanic rocks and they have been intruded into them in the form of a batholith or stock which has an irregular outline. The granites are generally widely jointed with joint spacing varying from 1 foot to 10 feet. Close to faults they may be comminuted or very closely jointed. The granites have a variable composition and colour but they are normally composed of feldspar, quartz and hornblende. Towards the contact with the volcanic rocks the granites are finer grained. The contact is usually sharp and well defined.

The volcanic rocks are variable in composition and consist of recrystallized and metamorphosed volcanic ashes (ignimbrites), and basalt and rhyolite lava flows which are probably metamorphosed. The ignimbrites are the commonest rock type. The rocks are generally closely to very closely jointed, with a spacing of the order of 3 inches to 1 foot, but in the coarser grained varieties the joint spacing may be very wide, of the order of 5 feet to 10 feet.

The granite rock underlies the area of Kowloon and the lower levels of Victoria whilst the volcanic rocks underlie the middle and upper levels of Victoria and much of the New Territories.

THE SOILS

The soils on the slopes of the hills of Hong Kong are derived from the weathering of the granites and the volcanic rocks. The soil may consist of weathered in situ rock or it may be of colluvial origin (slopewash) being derived from material that moves down the slope either by surface creep or mass movement as a result of torrential rainstorms.

The soils can be classified in the following manner:

- (A) Residual in situ granite soil
- (B) Residual in situ volcanic soil
- (C) Colluvial soil derived from the weathering of granitic rocks
- (D) Colluvial soil derived from the weathering of volcanic rocks.

The soils derived from the granitic rocks are usually more clayey than the soils derived from the volcanic rocks whether they are formed by in situ weathering or by colluvial processes. In Hong Kong, hill slopes composed of soil derived from the weathering of granitic rocks usually have a slope angle of 30° whereas those in volcanic soils usually have an angle of 25°. This might be taken to indicate that the granitic soils are stronger than the volcanic soils. Many of the slopes in areas of both the granite and the volcanic rocks show signs of instability of weathered soil mantle.

The soil cover over the rock can vary from a few feet to at least 100 feet depending upon the position of the water table, the slope angle, the soil type, the stability of the slope and the direction that the slope is facing.

The weathered in situ soil can be recognized as such by the presence of relics of joint planes and the original crystal fabric of the rock. Where the rock is widely jointed the passage from completely weathered material (soil) to fresh rock is extremely variable and this is probably related to the joint pattern, the spacing of the joints and the position of the water table. During the dry season the water table is usually located within the underlying rock and not within the soil. There is normally a gradation from completely weathered rock to fresh rock. In the zone where the rock may be described as being moderately weathered (the feldspars have been altered to kaolin but the rock cannot be crumbled in the hand), the joints are usually open and this represents a zone which is frequently more permeable than either the overlying soil or the underlying fresh rock. (In countries such as South Africa this zone is sometimes developed as an aquifer).

In the more closely jointed rock the passage from soil to almost fresh rock can occur over a depth of 1 or 2 feet. The joint planes in the volcanic rocks are often coated with a clay-type mineral which frequently remains along the lines of relict joints in the soil.

The weathering of granite usually produces kaolin-type clay minerals but the weathering of volcanic rocks can produce montmorillonitic (bentonite) and halloysite clay.

The colluvial soils usually consist of angular and sub-angular blocks of rock (varying in size from a few inches to several feet) in a matrix of clayey silty soil derived from the weathering of rock from above the area being considered. In Hong Kong many of the natural slopes composed of colluvium become unstable as a result of torrential storms. The most unstable areas appear to be those where the colluvial material is derived from the volcanic rocks.

Appendix V—Contd.

APPENDIX B

LOGS OF BOREHOLES IN THE PO SHAN HILLSIDE
MALAYAN DRILLERS (H.K.) LTD.

CONTRACT No. 502/71 SITE INVESTIGATION : REPORT ON DRILL/BORE HOLE No. E-1 Page 1							
CLIENT : HIGHWAY (H) OFFICE		G. L. : EX. G.L.		ORIENTATION : VERTICAL		MACHINE : LONGYEAR 34	
JOB No. :		METHOD : ROTARY DRILL		CORE BARREL & BIT DESIGN : NX DIAMOND BIT			
JOB NAME : KOTEWALL ROAD /PO SHAN ROAD		DRAWING No. :					
DRAWING No. :							
Sample No. Depth and Type	Progress	Water Recov. % & Level	Core Recov. % & Size	DESCRIPTION OF STRATA	Depth (ft.)	Symbolic Log	
				GREY & BROWN SILTY CLAY WITH SAND & ORGANIC MATERIALS	0.67		
U1 $\frac{1}{2}$ "1 4'-8"				BROWN SILTY CLAY WITH SAND & PARTICLES OF GRAVELS			
U1 $\frac{1}{2}$ "2 5'-4"							
U1 $\frac{1}{2}$ "3 6'-0"							
U1 $\frac{1}{2}$ "4 9'-2"	16/8/72			RED, LIGHT GREY & YELLOW CLAYEY SILT WITH SAND PARTICLES	8.50		
U1 $\frac{1}{2}$ "5 11'-0"	17/8/72			WEATHERED VOLCANIC ROCK (BOULDER)	9.17		
U1 $\frac{1}{2}$ "6 14'-8"	17/8/72 18/8/72	18/8 ▽		RED, LIGHT GREY & YELLOW SANDY SILT WITH CLAY	10.33		
	18/8/72						
	19/8/72			GREY FRACTURED VOLCANIC ROCK (BOULDER)	14.67		
	20/8/72						
U1 $\frac{1}{2}$ "7 22'-1"	22/8/72				20		
U1 $\frac{1}{2}$ "8 22'-9"				RED, LIGHT GREY & YELLOW SANDY SILT WITH CLAY (DECOMPOSED VOLCANIC ROCK)	21.42		
					25		
				GREYISH WHITE & BROWN HIGHLY WEATHERED & FRACTURED VOLCANIC ROCK (BOULDER)	25.17		
				RED CLAYEY SILT WITH SAND PARTICLES	27.50		
	23/8/72			GREYISH BROWN SANDY CLAY	28.25		
				BOULDER	29.33		
U1 $\frac{1}{2}$ "9 31'-11"					29.75		
U1 $\frac{1}{2}$ "10 32'-5"				RED, LIGHT GREY & YELLOW CLAYEY SILT WITH PARTICLES IF GRAVELS	32.50		
				RED, LIGHT GREY SANDY SILT WITH PARTICLES OF GRAVELS	34.33		
	23/8/72			RED & LIGHT GREY SANDY CLAY	34.75		
				RED & LIGHT GREY CLAYEY SILT WITH SAND PARTICLES	35.67		
				WEATHERED VOLCANIC ROCK (BOULDER)	36.25		
				RED, LIGHT GREY & YELLOW SILTY SAND WITH LITTLE CLAY	36.83		
U1 $\frac{1}{2}$ "11 38'-6"							
U1 $\frac{1}{2}$ "12 39'-4"				RED & LIGHT GREY CLAYEY SILT WITH SAND PARTICLES	41.00		
U1 $\frac{1}{2}$ "13 40'-0"							
				RED SILTY CLAY WITH SAND PARTICLES	43.00		
				RED CLAYEY SILT WITH SAND PARTICLES	45.08		
	24/8/72						
	24/8/72			GREY & BROWN FRACTURED & WEATHERED VOLCANIC ROCK (BOULDER)			
					50		

W : water sample — : casing depth
 U : undisturbed sample — : hole depth
 D : disturbed sample ▽ : G.W. first encountered
 L : liner sample ▼ : morning water level
 () : N value

REMARKS

Appendix V—Contd.

Appendix B—Contd.

MALAYAN DRILLERS (H.K.) LTD.

CONTRACT No. 502/71 SITE INVESTIGATION ; REPORT ON DRILL/BORE HOLE No. E-1		Page 2				
Sample No. Depth and Type	Progress	Water Recov. % & Level	Core Recov. % & Size	DESCRIPTION OF STRATA	Depth (ft.)	Symbolic Log
				GREY & BROWN FRACTURED & WEATHERED VOLCANIC ROCK	51.17	
U1 1/2" 14 52'-6"				RED, GREY & BROWN SILTY SAND WITH LITTLE CLAY & ROCK FRAGMENTS	54.00	
U1 1/2" 15 54'-8"				55 GREYISH YELLOW & BROWN SILT, WITH LITTLE CLAY & FINE GRAVELS	56.75	
U1 1/2" 16 55'-4"				RED & LIGHT GREY CLAYEY SILT WITH SAND PARTICLES	61.00	
U1 1/2" 17 56'-0"				60 YELLOWISH BROWN SANDY CLAY	62.25	
U1 1/2" 18 59'-8"				RED & BROWN CLAYEY SILT WITH SAND PARTICLES	63.83	
U1 1/2" 19 60'-4"	25/8/72			65 GREYISH WHITE & BROWN HIGHLY WEATHERED & FRACTURED VOLCANIC ROCK (BOULDER)	67.17	
U1 1/2" 20 61'-0"	25/25/8/72			RED & LIGHT GREY CLAYEY SILT WITH SAND PARTICLES	69.42	
				70 GREY VOLCANIC ROCK	71.17	
				GREYISH WHITE & BROWN HIGHLY WEATHERED VOLCANIC ROCK	75.00	
				75 RED & LIGHT GREY CLAYEY SILT WITH SAND PARTICLES	76.42	
				RED & LIGHT GREY CLAYEY SILT WITH PARTICLES OF GRAVELS	77.00	
	26/8/72			80 RED & LIGHT GREY CLAYEY SILT WITH SAND PARTICLES	84.92	
U1 1/2" 21 81'-11"				85 BROWN SILTY CLAY WITH SAND PARTICLES	85.33	
U1 1/2" 22 82'-7"	27/8/72			RED & LIGHT GREY CLAYEY SILT WITH SAND PARTICLES	87.08	
U1 1/2" 23 82'-10"	28/8/72			BROWN SILTY CLAY WITH SAND PARTICLES	87.33	
	29/8/72			RED & LIGHT GREY CLAYEY SILT WITH SAND PARTICLES	89.50	
U1 1/2" 24 87'-11"				90 BROWNISH RED SILTY CLAY WITH SAND PARTICLES	89.67	
				GREY FRACTURED VOLCANIC ROCK (FLESH ROCK) (FISSURED & JOINTED FROM 91'-2" to 91'-9")	98.00	
	28/8/72			95		
				100 GREY & YELLOW FRACTURED VOLCANIC ROCK (SLIGHTLY WEATHERED)		

W : water sample = : casing depth
 U : undisturbed sample - : hole depth
 D : disturbed sample ▽ : G.W. first encountered
 L : liner sample ▼ : morning water level
 () : N value

REMARKS (FISSURED & JOINTED FROM 1) 98'-10" to 2) 99'-1" to 99'-4"

SCALE 1" = 5 ft.

Appendix V—Contd.

Appendix B—Contd.

MALAYAN DRILLERS (H.K.) LTD.

CONTRACT No. 502/71 SITE INVESTIGATION : REPORT ON DRILL/BORE HOLE No. E-1 Page 3

CLIENT : HIGHWAY (H) OFFICE G. L. : EX. G.L.
 JOB No. : ORIENTATION : VERTICAL
 JOB NAME : KOTEWALL RD./PO SHAN RD. LANDSLIDE METHOD : ROTARY DRILL
 DRAWING No. : MACHINE : LONGYEAR 34
 CORE BARREL & BIT DESIGN : NX DIAMOND BIT

Sample No. Depth and Type	Progress	Water Recov. % & Level 88888	Core Recov. % & Size 88888	DESCRIPTION OF STRATA	Depth (ft.)	Symbolic Log																																																																											
				GREY & YELLOW FRACTURED VOLCANIC ROCK (SLIGHTLY WEATHERED) (FISSURED FROM 100'-5" to 100'-10")																																																																													
	29/8/72			GREY FRACTURED VOLCANIC ROCK (FLESH ROCK) FISSURED FROM : 1) 101'-1" to 101'-3" 2) 101'-7" 3) 102'-10" 4) 103'-4" to 105'-8" 5) 110'-5" 6) 111'-0" to 111'-3" 7) 115'-5" 8) 116'-10" to 117'-0" 9) 119'-0" to 119'-2"	105 110 115 120																																																																												
	30/8/72																																																																																
	31/8/72			OPERATION STOPPED AT 121'-8"	121.67																																																																												
				125 DRY DRILLING IN "COMMON GROUND" WITH 'NX' CORE BARREL START FROM 0'-0" to 89'-8"																																																																													
				<table border="1"> <thead> <tr> <th>DATE</th> <th>TIME</th> <th>WATER LEVEL (BELOW G.L.)</th> </tr> </thead> <tbody> <tr><td>18/8</td><td>08:30</td><td>14'-0"</td></tr> <tr><td>"</td><td>19:00</td><td>1'-9"</td></tr> <tr><td>19/8</td><td>08:30</td><td>3'-8"</td></tr> <tr><td>"</td><td>18:00</td><td>3'-1"</td></tr> <tr><td>21/8</td><td>08:35</td><td>11'-2"</td></tr> <tr><td>"</td><td>12:00</td><td>9'-8"</td></tr> <tr><td>22/8</td><td>08:45</td><td>11'-7"</td></tr> <tr><td>"</td><td>20:00</td><td>4'-2"</td></tr> <tr><td>23/8</td><td>08:40</td><td>12'-1"</td></tr> <tr><td>24/8</td><td>20:05</td><td>45'-6"</td></tr> <tr><td>25/8</td><td>08:15</td><td>46'-9"</td></tr> <tr><td>25/8</td><td>20:00</td><td>23'-4"</td></tr> <tr><td>26/8</td><td>08:20</td><td>32'-10"</td></tr> <tr><td>"</td><td>20:00</td><td>13'-9"</td></tr> <tr><td>27/8</td><td>08:30</td><td>34'-2"</td></tr> <tr><td>"</td><td>18:00</td><td>26'-1"</td></tr> <tr><td>28/8</td><td>08:30</td><td>31'-3"</td></tr> <tr><td>"</td><td>20:00</td><td>29'-1"</td></tr> <tr><td>29/8</td><td>08:30</td><td>60'-3"</td></tr> <tr><td>"</td><td>20:00</td><td>33'-6"</td></tr> <tr><td>30/8</td><td>08:20</td><td>66'-2"</td></tr> <tr><td>"</td><td>20:00</td><td>29'-6"</td></tr> <tr><td>31/8</td><td>08:20</td><td>67'-5"</td></tr> <tr><td>"</td><td>19:00</td><td>44'-6"</td></tr> </tbody> </table>	DATE	TIME	WATER LEVEL (BELOW G.L.)	18/8	08:30	14'-0"	"	19:00	1'-9"	19/8	08:30	3'-8"	"	18:00	3'-1"	21/8	08:35	11'-2"	"	12:00	9'-8"	22/8	08:45	11'-7"	"	20:00	4'-2"	23/8	08:40	12'-1"	24/8	20:05	45'-6"	25/8	08:15	46'-9"	25/8	20:00	23'-4"	26/8	08:20	32'-10"	"	20:00	13'-9"	27/8	08:30	34'-2"	"	18:00	26'-1"	28/8	08:30	31'-3"	"	20:00	29'-1"	29/8	08:30	60'-3"	"	20:00	33'-6"	30/8	08:20	66'-2"	"	20:00	29'-6"	31/8	08:20	67'-5"	"	19:00	44'-6"	130 135 140 145 150	
DATE	TIME	WATER LEVEL (BELOW G.L.)																																																																															
18/8	08:30	14'-0"																																																																															
"	19:00	1'-9"																																																																															
19/8	08:30	3'-8"																																																																															
"	18:00	3'-1"																																																																															
21/8	08:35	11'-2"																																																																															
"	12:00	9'-8"																																																																															
22/8	08:45	11'-7"																																																																															
"	20:00	4'-2"																																																																															
23/8	08:40	12'-1"																																																																															
24/8	20:05	45'-6"																																																																															
25/8	08:15	46'-9"																																																																															
25/8	20:00	23'-4"																																																																															
26/8	08:20	32'-10"																																																																															
"	20:00	13'-9"																																																																															
27/8	08:30	34'-2"																																																																															
"	18:00	26'-1"																																																																															
28/8	08:30	31'-3"																																																																															
"	20:00	29'-1"																																																																															
29/8	08:30	60'-3"																																																																															
"	20:00	33'-6"																																																																															
30/8	08:20	66'-2"																																																																															
"	20:00	29'-6"																																																																															
31/8	08:20	67'-5"																																																																															
"	19:00	44'-6"																																																																															
W : water sample = : casing depth U : undisturbed sample — : hole depth D : disturbed sample ▽ : G.W. first encountered L : liner sample ▼ : morning water level () : N value				REMARKS																																																																													

Appendix V—Contd.

Appendix B—Contd.

MALAYAN DRILLERS (H.K.) LTD.

CONTRACT No. 502/71 SITE INVESTIGATION : REPORT ON DRILL/BORE HOLE No. E-3		Page 1.				
CLIENT : HIGHWAY (H) OFFICE	G. L. : EX. G.L.					
JOB No. :	ORIENTATION : VERTICAL					
JOB NAME : KOTEWALL RD. LANSLIDE - PO SHAN RD.	METHOD : ROTARY DRILL					
DRAWING No. :	MACHINE : LONGYEAR 34					
	CORE BARREL & BIT DESIGN : NX DIAMOND BIT					
Sample No. Depth and Type	Progress	Water Recov. % & Level	Core Recov. % & Size	DESCRIPTION OF STRATA	Depth (ft.)	Symbolic Log
				BROWNISH RED SILTY CLAY WITH SAND PARTICLES		
				GREYISH YELLOW SILTY SAND WITH SOME CLAY & SAND PARTICLES	2.17 2.58	
				BROWNISH RED CLAYEY SILT WITH SAND PARTICLES	4.00	
U1 1/2"1 4'-8"				5 BROWNISH RED SILTY CLAY WITH SAND PARTICLES		
U1 1/2"2 5'-4"						
U1 1/2"3 6'-0"						
				BROWNISH RED SANDY CLAY	7.00 7.50	
U1 1/2"4 9'-8"				10 RED & YELLOW CLAYEY SILT WITH SAND PARTICLES		
U1 1/2"5 10'-4"	5/9/72				10.67	
U1 1/2"6 10'-8"				RED & YELLOW CLAYEY SILT WITH SAND & PARTICLE OF GRAVELS	11.75	
				GREYISH YELLOW & RED WEATHERED VOLCANIC ROCK (BOULDER)	12.83	
U1 1/2"7 14'-3"				15 RED & YELLOW CLAYEY SILT WITH SAND PARTICLES		
U1 1/2"8 14'-11"					16.58	
U1 1/2"9 15'-4"				RED SANDY CLAY	17.91	
				RED & YELLOW CLAYEY SILT WITH SAND PARTICLES	19.00	
U1 1/2"10 19'-8"				20 RED SANDY CLAY	19.58	
				RED & YELLOW CLAYEY SILT WITH SAND PARTICLES		
U1 1/2"11 23'-4"					23.67	
	6/9/72			25 GREYISH WHITE & RED FRACTURED & WEATHERED VOLCANIC ROCK	24.67	
				GREYISH WHITE FRACTURED & WEATHERED VOLCANIC ROCK (HIGHLY WEATHERED ROCK, JOINTED FROM 25'-4" TO 25'-10")	27.00	
	7/9/72			GREYISH WHITE FRACTURED VOLCANIC ROCK		
				30 GREYISH YELLOW & RED HIGHLY WEATHERED & FRACTURED VOLCANIC ROCK	29.67	
	8/9/72			RED, LIGHT GREY & YELLOW CLAYEY SILT WITH PARTICLE GRAVELS	30.91 31.58	
				GREYISH WHITE FRACTURED VOLCANIC ROCK	32.83	
				LIGHT GREY, YELLOW & RED FRACTURED VOLCANIC ROCK (HIGHLY WEATHERED)	34.08	
				35 RED, WHITE & YELLOW SILTY CLAY WITH SAND	35.00	
	9/9/72			RED & YELLOW CLAYEY SILT WITH SAND PARTICLES	36.00	
				GREY VOLCANIC ROCK (FLESH ROCK)		
	9/9/72				38.92	
				40 GREY FRACTURED VOLCANIC ROCK (SLIGHTLY WEATHERED ROCK JOINTED FROM 29'-11" to 40'-4"	42.08	
				GREYISH WHITE & YELLOW FRACTURED VOLCANIC ROCK (HIGHLY WEATHERED ROCK JOINTED FROM 41'-7" to 41'-11" & 42'-10" to 44'-6")	44.50	
				45 GREYISH WHITE & YELLOW HIGHLY WEATHERED & FRACTURED VOLCANIC ROCK		
					50	

W : water sample --- : casing depth
 U : undisturbed sample - - - : hole depth
 D : disturbed sample ▽ : G.W. first encountered
 L : liner sample ▼ : morning water level
 () : N value

REMARKS

Appendix V—Contd.

Appendix B—Contd.

MALAYAN DRILLERS (H.K.) LTD.

CONTRACT No. 502/71 SITE INVESTIGATION : REPORT ON DRILL/BORE HOLE No. E-3 Page 2.

CONTRACTOR: G. L. : EX. G.L.
 CLIENT : HIGHWAY (H) OFFICE ORIENTATION: VERTICAL
 JOB No. : METHOD : ROTARY DRILL
 JOB NAME : KOTEWALL RD. LANDSLIDE - PO SHAN MACHINE : LONGYEAR 34
 DRAWING No.: RD. CORE BARREL & BIT DESIGN: NX DIAMOND BIT

Sample No. Depth and Type	Progress	Water Recov. % & Level	Core Recov. % & Size	DESCRIPTION OF STRATA	Depth (ft.)	Symbolic Log
	10/9/72			GREYISH WHITE & YELLOW HIGHLY WEATHERED & FRACTURED VOLCANIC ROCK	51.25	▽▽▽
				GREYISH WHITE & YELLOW FRACTURED VOLCANIC ROCK (WEATHERED ROCK JOINTED FROM : 1) 55'-3" TO 55'-11" 2) 56'-2" 3) 57'-0" TO 61'-4")	55	▽▽▽
					60	▽▽▽
					61.33	▽▽▽
				GREY FRACTURED VOLCANIC ROCK (FLESH ROCK) FISSURED FROM: 1) 61'-8" TO 62'-2" 2) 63'-5" TO 63'-10" 3) 67'-4" TO 67'-8"	65	▽▽▽
	11/9/72				70	▽▽▽
				GREY VOLCANIC ROCK (FLESH ROCK)	75	▽▽▽
	12/9/72				80	▽▽▽
					83.17	▽▽▽
	13/9/72			GREY FRACTURED VOLCANIC ROCK (FLESH ROCK) 85 FISSURED AT: 1) 83'-2" 2) 84'-6" TO 84'-10" 3) 88'-3" TO 88'-6" 4) 89'-3" TO 90'-7"	85	▽▽▽
					90	▽▽▽
	14/9/72				90.58	▽▽▽
				OPERATION STOPPED AT 90'-7" DRY DRILLING IN "COMMON GROUND" WITH 'NX' CORE BARREL START FROM 0'-0" to 36'-0"	95	▽▽▽
					100	▽▽▽

W : water sample = : casing depth
 U : undisturbed sample - : hole depth
 D : disturbed sample ▽ : G.W. first encountered
 L : liner sample ▼ : morning water level
 () : N value

REMARKS

SCALE 1" = 5 ft.

Appendix V—Contd.

Appendix B—Contd.

MALAYAN DRILLERS (H.K.) LTD.

CONTRACT No. 502/71		SITE INVESTIGATION : REPORT ON DRILL/BORE HOLE No. E-3		Page 3
CLIENT	: HIGHWAY (H) OFFICE	G. L.	: EX. G.L.	
JOB No.	:	ORIENTATION	: VERTICAL	
JOB NAME	: KOTEWALL ROAD LANDSLIDE - PO	METHOD	: ROTARY DRILL	
	: SHAN ROAD	MACHINE	: LONGYEAR 34	
DRAWING No.:	:	CORE BARREL & BIT DESIGN:	NX DIAMOND BIT	

Sample No. Depth and Type	Progress	Water Recov. % & Level	Core Recov. % & Size	DESCRIPTION OF STRATA	Depth (ft.)	Symbolic Log																																																																		
				<table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>DATE</th> <th>TIME</th> <th>WATER LEVEL (BELOW G.L.)</th> </tr> </thead> <tbody> <tr><td>6/9</td><td>08:20</td><td>Nil</td></tr> <tr><td>"</td><td>20:00</td><td>9'-1"</td></tr> <tr><td>7/9</td><td>08:20</td><td>21'-3"</td></tr> <tr><td>"</td><td>20:00</td><td>24'-4"</td></tr> <tr><td>5 8/9</td><td>08:30</td><td>27'-11"</td></tr> <tr><td>"</td><td>20:00</td><td>25'-8"</td></tr> <tr><td>9/9</td><td>08:15</td><td>28'-4"</td></tr> <tr><td>"</td><td>20:00</td><td>33'-7"</td></tr> <tr><td>10/9</td><td>08:15</td><td>35'-5"</td></tr> <tr><td>"</td><td>20:00</td><td>30'-1"</td></tr> <tr><td>11/9</td><td>08:15</td><td>51'-0"</td></tr> <tr><td>"</td><td>20:00</td><td>50'-8"</td></tr> <tr><td>12/9</td><td>08:00</td><td>57'-2"</td></tr> <tr><td>"</td><td>20:00</td><td>76'-9"</td></tr> <tr><td>13/9</td><td>08:00</td><td>60'-2"</td></tr> <tr><td>"</td><td>20:00</td><td>50'-7"</td></tr> <tr><td>15 14/9</td><td>08:00</td><td>64'-9"</td></tr> <tr><td>"</td><td>18:00</td><td>58'-9"</td></tr> <tr><td colspan="3">No water return at :</td></tr> <tr><td colspan="3">1. 37'-7" to 70'-2"</td></tr> <tr><td>20</td><td colspan="2">2. 87'-5" to 90'-7"</td></tr> </tbody> </table>	DATE	TIME	WATER LEVEL (BELOW G.L.)	6/9	08:20	Nil	"	20:00	9'-1"	7/9	08:20	21'-3"	"	20:00	24'-4"	5 8/9	08:30	27'-11"	"	20:00	25'-8"	9/9	08:15	28'-4"	"	20:00	33'-7"	10/9	08:15	35'-5"	"	20:00	30'-1"	11/9	08:15	51'-0"	"	20:00	50'-8"	12/9	08:00	57'-2"	"	20:00	76'-9"	13/9	08:00	60'-2"	"	20:00	50'-7"	15 14/9	08:00	64'-9"	"	18:00	58'-9"	No water return at :			1. 37'-7" to 70'-2"			20	2. 87'-5" to 90'-7"			
DATE	TIME	WATER LEVEL (BELOW G.L.)																																																																						
6/9	08:20	Nil																																																																						
"	20:00	9'-1"																																																																						
7/9	08:20	21'-3"																																																																						
"	20:00	24'-4"																																																																						
5 8/9	08:30	27'-11"																																																																						
"	20:00	25'-8"																																																																						
9/9	08:15	28'-4"																																																																						
"	20:00	33'-7"																																																																						
10/9	08:15	35'-5"																																																																						
"	20:00	30'-1"																																																																						
11/9	08:15	51'-0"																																																																						
"	20:00	50'-8"																																																																						
12/9	08:00	57'-2"																																																																						
"	20:00	76'-9"																																																																						
13/9	08:00	60'-2"																																																																						
"	20:00	50'-7"																																																																						
15 14/9	08:00	64'-9"																																																																						
"	18:00	58'-9"																																																																						
No water return at :																																																																								
1. 37'-7" to 70'-2"																																																																								
20	2. 87'-5" to 90'-7"																																																																							
					25																																																																			
					30																																																																			
					35																																																																			
					40																																																																			
					45																																																																			
					50																																																																			

<p>W : water sample ==: casing depth</p> <p>U : undisturbed sample ---: hole depth</p> <p>D : disturbed sample ▽ : G.W. first encountered</p> <p>L : liner sample ▼ : morning water level</p> <p>() : N value</p>	REMARKS
--	---------

Appendix V—Contd.

Appendix B—Contd.

MALAYAN DRILLERS (H.K.) LTD.

CONTRACT No. 502/71 SITE INVESTIGATION : REPORT ON DRILL/BORE HOLE No. E-5 Page 1						
CLIENT : HIGHWAY (H) OFFICE		G. L. : EX. G.L.		ORIENTATION : VERTICAL		
JOB No. :		METHOD : ROTARY DRILL		MACHINE : LONGYEAR 34		
JOB NAME : KOTEWALL RD. LANDSLIDE-PO SHAN RD		DRAWING No. : CORE BARREL & BIT DESIGN: NX DIAMOND BIT				
Sample No. Depth and Type	Progress	Water Recov. % & Level	Core Recov. % & Size	DESCRIPTION OF STRATA	Depth (ft.)	Symbolic Log
				BROWNSH GREY SILTY CLAY WITH SAND & ORGANIC MATERIALS	1.08	
				BROWN SILTY CLAY WITH SAND & ROOTS OF TREE	2.33	
U1 ¹ / ₂ "1 4'-8"				BROWN SILTY CLAY WITH PARTICLES OF GRAVELS	5	
U1 ¹ / ₂ "2 5'-4"					6.00	
U1 ¹ / ₂ "3 6'-0"						
U1 ¹ / ₂ "4 9'-8"				RED & YELLOW CLAYEY SILT WITH SAND PARTICLES	10	
U1 ¹ / ₂ "5 10'-2"					10.67	
				YELLOW SILTY CLAY WITH SAND PARTICLES	11.25	
				RED & YELLOW CLAYEY SILT WITH SAND PARTICLES	12.42	
				RED SILTY CLAY WITH SAND PARTICLES	12.92	
U1 ¹ / ₂ "6 14'-8"				RED & YELLOW CLAYEY SILT WITH SAND PARTICLES	15	
U1 ¹ / ₂ "7 15'-1"				BROWN SILTY CLAY WITH SAND PARTICLES	15.42	
U1 ¹ / ₂ "8 15'-5"				BROWN CLAYEY SILT WITH SAND PARTICLES	16.00	
	25/8/72			BROWN SILTY CLAY WITH SAND PARTICLES	16.50	
				BROWN & WHITE CLAYEY SILT WITH SAND PARTICLES	17.50	
				BROWN & WHITE SILTY CLAY WITH SAND PARTICLES	18.25	
U1 ¹ / ₂ "9 19'-8"				RED & LIGHT GREY CLAYEY SILT WITH SAND PARTICLES	20	
U1 ¹ / ₂ "10 20'-3"						
U1 ¹ / ₂ "11 24'-8"					25	
U1 ¹ / ₂ "12 25'-4"					25.75	
U1 ¹ / ₂ "13 25'-9"				BROWN & GREY SILTY CLAY WITH SAND PARTICLES	26.50	
				RED & LIGHT GREY CLAYEY SILT WITH SAND PARTICLES		
					29.00	
U1 ¹ / ₂ "14 29'-8"				LIGHT RED CLAYEY SILT WITH SAND PARTICLES	30	
U1 ¹ / ₂ "15 30'-0"	26/8/72					
					31.50	
				BROWNISH RED SILTY CLAY WITH SAND PARTICLES	33.17	
				LIGHT RED CLAYEY SILT WITH SAND PARTICLES	34.58	
U1 ¹ / ₂ "16 34'-7"					35	
U1 ¹ / ₂ "17 34'-11"	27/8/72			GREYISH BROWN CLAYEY SILT WITH SAND PARTICLES	36.42	
				GREYISH BROWN SANDY SILT WITH LITTLE CLAY	37.75	
U1 ¹ / ₂ "18 39'-8"				GREYISH BROWN CLAYEY SILT WITH SAND PARTICLES	40	
U1 ¹ / ₂ "19 40'-2"						
					43.58	
U1 ¹ / ₂ "20 44'-0"				GREY & BROWN SANDY CLAY	45	
U1 ¹ / ₂ "21 44'-7"				GREYISH BROWN CLAYEY SILT WITH SAND PARTICLES	46.33	
				GREYISH BROWN SANDY CLAY	47.50	
U1 ¹ / ₂ "22 49'-8"	28/8/72			GREYISH BROWN SANDY SILT WITH THIN LAYER OF CLAY	50	
U1 ¹ / ₂ "23 50'-1"						

W: water sample =: casing depth
 U: undisturbed sample -: hole depth
 D: disturbed sample ▽: G.W. first encountered
 L: liner sample ▼: morning water level
 (): N value

REMARKS

Appendix V—Contd.

Appendix B—Contd.

MALAYAN DRILLERS (H.K.) LTD.

CONTRACT No. 502/71 SITE INVESTIGATION ; REPORT ON DRILL/ BORE HOLE No. E-5		Page 2				
CONTRACTOR: G. L. : EX. G.L.		ORIENTATION: VERTICAL				
CLIENT : HIGHWAY (H) OFFICE		METHOD : ROTARY DRILL				
JOB No. : KOTEWALL RD. LANDSLIDE - PO SHAN		MACHINE : LONGYEAR 34				
JOB NAME : RD.		CORE BARREL & BIT DESIGN: NX DIAMOND BIT				
DRAWING No. :						
Sample No. Depth and Type	Progress	Water Recov. % & Level	Core Recov. % & Size	DESCRIPTION OF STRATA	Depth (ft.)	Symbolic Log
	28/8/72			GREY SILTY SAND	50.08 50.75	
				GREYISH BROWN SANDY SILT WITH LITTLE CLAY		
U1 1/2" 24 54' - 5"						
U1 1/2" 25 54' - 9"	29/8/72				55	
				GREYISH WHITE & YELLOW FRACTURED VOLCANIC ROCK (BOULDER)	57.00	
	29/8/72			GREY, WHITE & YELLOW CLAYEY SILT WITH SAND PARTICLES	58.33	
				GREY SANDY CLAY	59.50	
U1 1/2" 26 59' - 3"						
U1 1/2" 27 59' - 6"				GREY, WHITE & YELLOW SILTY SAND WITH LITTLE CLAY	61.17	
				LIGHT GREY & BROWN FRACTURED VOLCANIC ROCK (SLIGHTLY WEATHERED)(FISSURED & JOINTED FROM 61'-2" to 64'-0"	64.00	
	30/8/72					
				LIGHT GREY & BROWN FRACTURED VOLCANIC ROCK (HIGHLY WEATHERED)(FISSURED & JOINTED FROM 65'-2" to 67'-1")	68.00	
				LIGHT GREY & BROWN FRACTURED VOLCANIC ROCK (SLIGHTLY WEATHERED)(FISSURED & JOINTED FROM 68'-8" to 70'-0" & 70'-9" to 71'-5")	71.42	
	30/8/72					
				LIGHT GREY & BROWN FRACTURED VOLCANIC ROCK (HIGHLY WEATHERED)	73.83	
				SLIGHTLY WEATHERED & FRACTURED VOLCANIC ROCK	74.67	
				GREY FRACTURED VOLCANIC ROCK (FLESH ROCK) (FISSURED & JOINTED FROM 73'-10" to 76'-2")		
					80	
	31/8/72					
					85	
					90	
	1/9/72					
					95	
					100	

W : water sample = : casing depth
 U : undisturbed sample - : hole depth
 D : disturbed sample ▽ : G.W. first encountered
 L : liner sample ▼ : morning water level
 () : N value

REMARKS

SCALE 1" = 5 ft.

Appendix V—Contd.

Appendix B—Contd.

MALAYAN DRILLERS (H.K.) LTD.

CONTRACT No. 502/71 SITE INVESTIGATION : REPORT ON DRILL/BORE HOLE No. E-5 Page 3

CLIENT : HIGHWAY (H) OFFICE G. L. : EX. G.L.
 JOB No. : ORIENTATION : VERTICAL
 JOB NAME : KOTEWALL RD. LANDSLIDE - PO SHAN RD. METHOD : ROTARY DRILL
 DRAWING No. : MACHINE : LONGYEAR 34
 CORE BARREL & BIT DESIGN : NX DIAMOND BIT

Sample No. Depth and Type	Progress	Water Recov. % & Level	Core Recov. % & Size	DESCRIPTION OF STRATA	Depth (ft.)	Symbolic Log																																													
				GREY FRACTURED VOLCANIC ROCK (FLESH ROCK)		XXXXXX																																													
	2/9/72				105.75	XXXXXX																																													
				OPERATION STOPPED AT 105'-9"																																															
				DRY DRILLING IN "COMMON GROUND" WITH 'NX' CORE BARREL START FROM 0'-0" TO 61'-2"																																															
				<table border="1"> <thead> <tr> <th>DATE</th> <th>TIME</th> <th>WATER LEVEL (BELOW G.L.)</th> </tr> </thead> <tbody> <tr><td>25/8</td><td></td><td>Nil</td></tr> <tr><td>26/8</td><td></td><td>Nil</td></tr> <tr><td>27/8</td><td>08:00</td><td>Nil</td></tr> <tr><td>"</td><td>13:00</td><td>13'-6"</td></tr> <tr><td>28/8</td><td>08:00</td><td>18'-2"</td></tr> <tr><td>29/8</td><td>08:00</td><td>28'-4"</td></tr> <tr><td>30/8</td><td>08:00</td><td>47'-7"</td></tr> <tr><td>"</td><td>20:00</td><td>47'-1"</td></tr> <tr><td>31/8</td><td>08:00</td><td>53'-3"</td></tr> <tr><td>"</td><td>20:00</td><td>39'-6"</td></tr> <tr><td>1/9</td><td>08:00</td><td>77'-4"</td></tr> <tr><td>"</td><td>20:00</td><td>43'-6"</td></tr> <tr><td>2/9</td><td>08:00</td><td>54'-2"</td></tr> <tr><td>"</td><td>20:00</td><td>43'-1"</td></tr> </tbody> </table>	DATE	TIME	WATER LEVEL (BELOW G.L.)	25/8		Nil	26/8		Nil	27/8	08:00	Nil	"	13:00	13'-6"	28/8	08:00	18'-2"	29/8	08:00	28'-4"	30/8	08:00	47'-7"	"	20:00	47'-1"	31/8	08:00	53'-3"	"	20:00	39'-6"	1/9	08:00	77'-4"	"	20:00	43'-6"	2/9	08:00	54'-2"	"	20:00	43'-1"		
DATE	TIME	WATER LEVEL (BELOW G.L.)																																																	
25/8		Nil																																																	
26/8		Nil																																																	
27/8	08:00	Nil																																																	
"	13:00	13'-6"																																																	
28/8	08:00	18'-2"																																																	
29/8	08:00	28'-4"																																																	
30/8	08:00	47'-7"																																																	
"	20:00	47'-1"																																																	
31/8	08:00	53'-3"																																																	
"	20:00	39'-6"																																																	
1/9	08:00	77'-4"																																																	
"	20:00	43'-6"																																																	
2/9	08:00	54'-2"																																																	
"	20:00	43'-1"																																																	

W : water sample — : casing depth
 U : undisturbed sample — : hole depth
 D : disturbed sample ▽ : G.W. first encountered
 L : liner sample ▼ : morning water level
 () : N value

REMARKS

FIG. 1

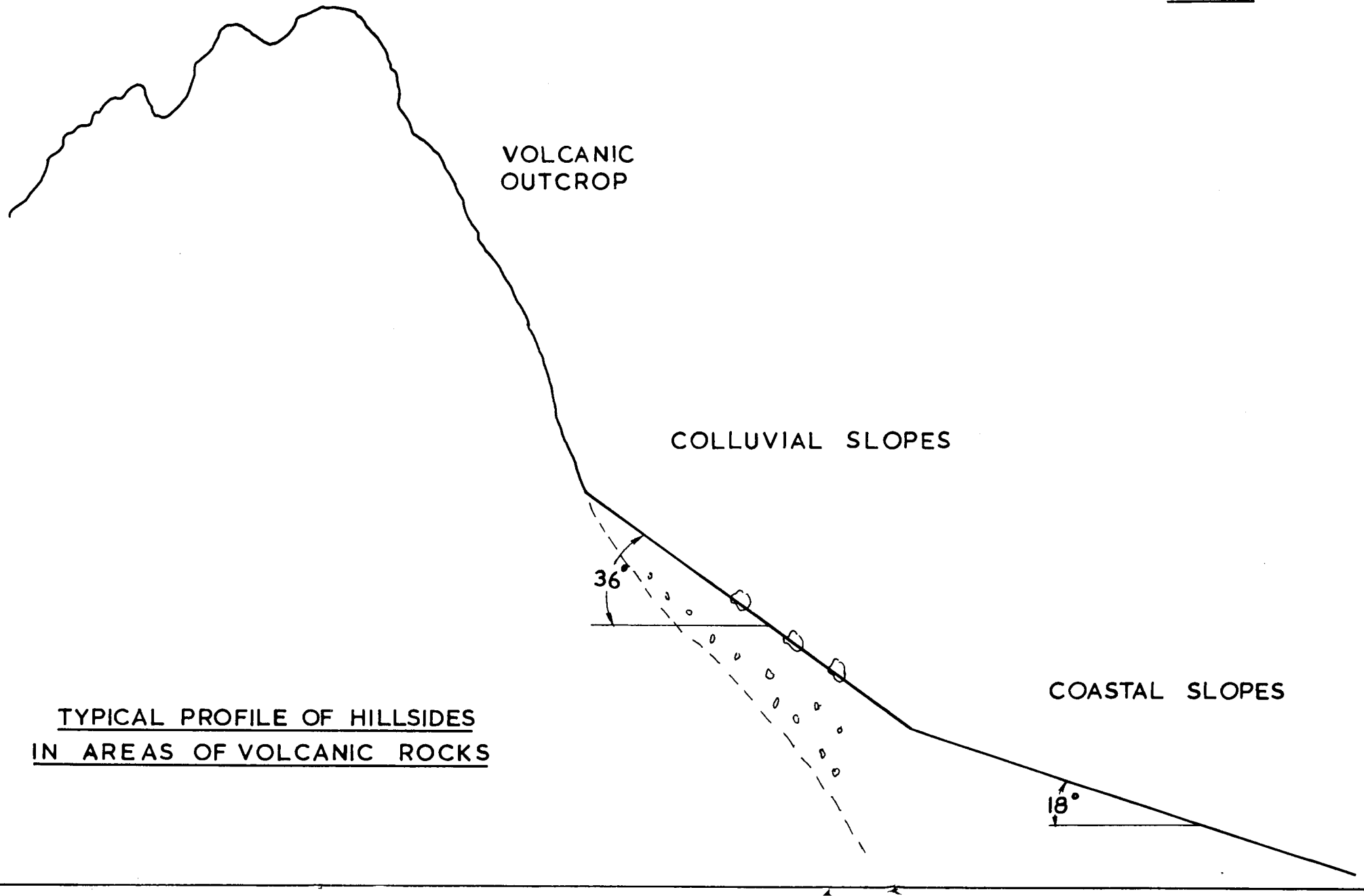
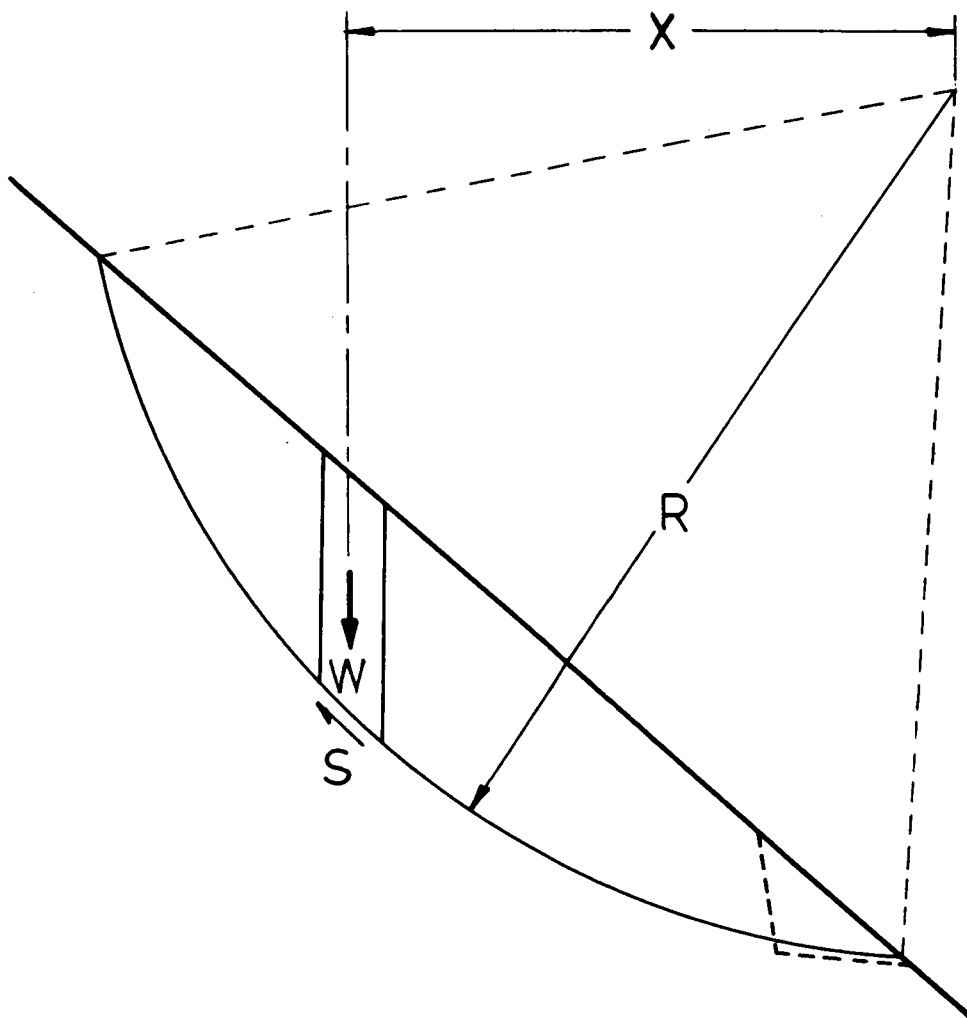


FIG. 2



$$WX = SR \text{ (AT FAILURE)}$$

$$F = \frac{\sum SR}{\sum WX}$$

$$S = C + W(1 - r) \text{ TAN } \phi$$

C = COHESION

ϕ = ANGLE OF INTERNAL FRICTION

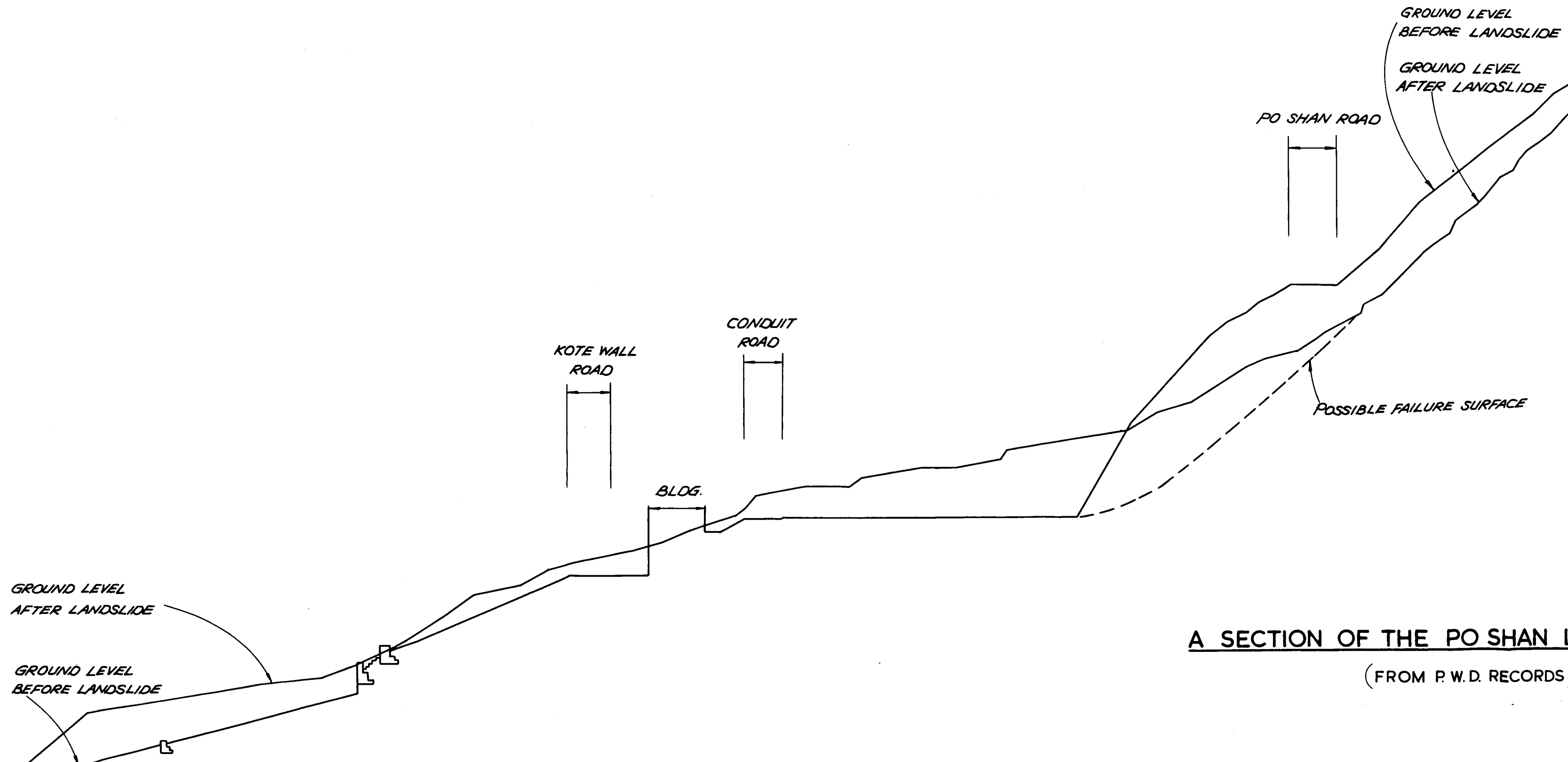
r = PORE PRESSURE RATIO

THE STABILITY ANALYSIS OF SLOPES
(AFTER FELLENIOUS)

FIG. 3



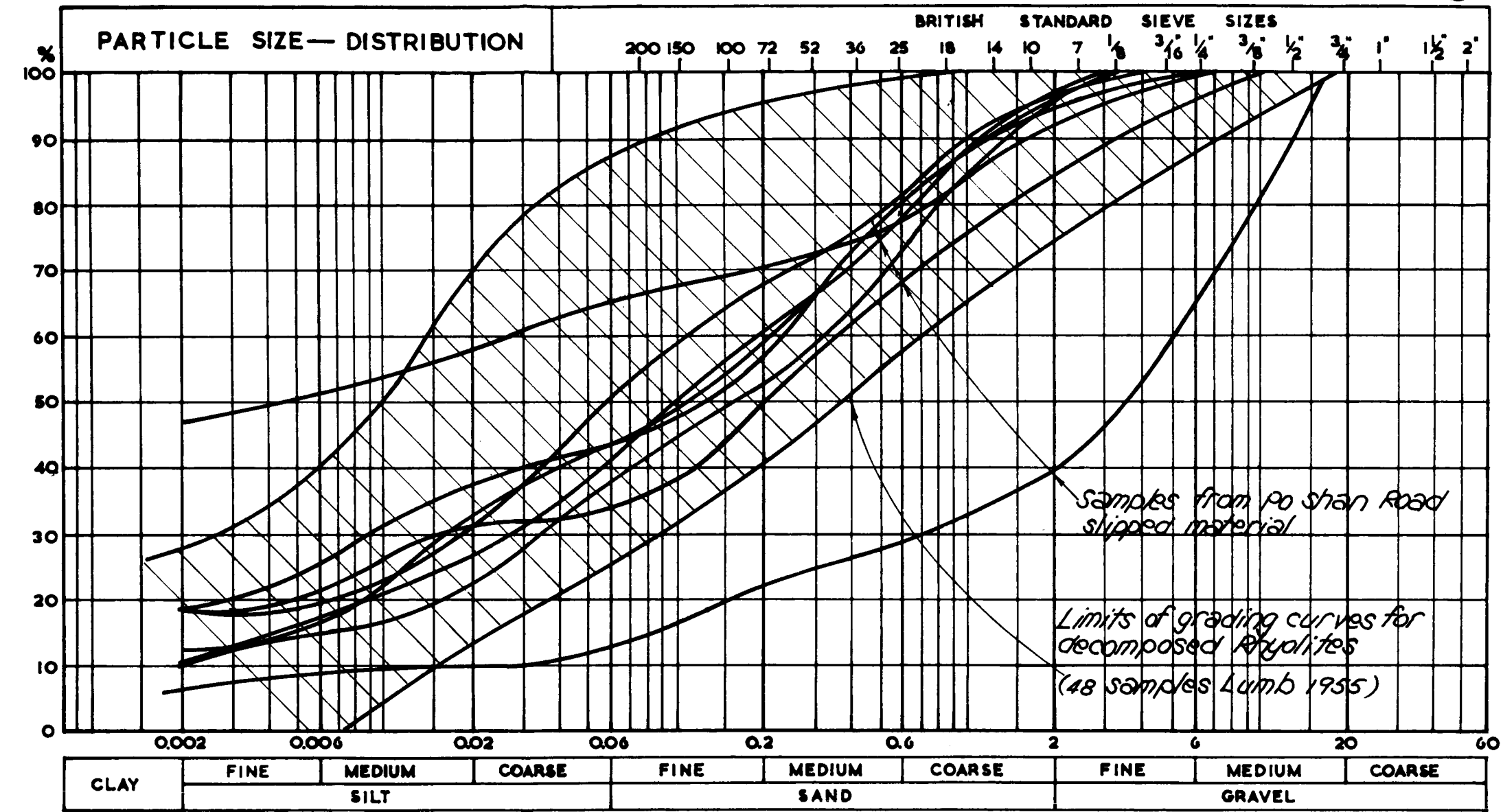
SCALE : 100 FT. TO 1 IN.



A SECTION OF THE PO SHAN LANDSLIDE

(FROM P.W.D. RECORDS)

FIG. 5



GRADING CURVES OF DECOMPOSED VOLCANIC ROCK

(TAKEN FROM P. W. D. TEST RESULTS FROM THE PO SHAN ROAD AREA)

APPENDIX VI

THE THUNDERSTORM AND HEAVY RAIN WARNING SERVICE

1. INTRODUCTION

The most intense rainfall in the world occurs in thunderstorms in the tropics; lightning associated with these storms causes damage to electrical installations and is a danger to people working with explosives. In 1966, three separate storms affecting Hong Kong caused a total loss of 86 lives and extensive damage to property. To reduce such losses, warnings of thunderstorms and heavy rain must reach, in good time, those persons responsible for taking the necessary precautions. The Royal Observatory has therefore introduced the Thunderstorm and Heavy Rain Warning Service in an attempt to minimize damage and loss of life caused by these meteorological hazards.

2. OBJECT OF THE THUNDERSTORM AND HEAVY RAIN WARNING SERVICE

The object of the Thunderstorm and Heavy Rain Warning Service provided by the Royal Observatory is to give short term notice of the likelihood of thunderstorms and heavy rain affecting any part of the Colony so that those who are most concerned can take precautionary measures. "Heavy rain" is taken to be a total rainfall of about 2 inches or more in any one hour, and "short term notice" is taken to mean that the warning will be issued 6 hours or less before the expected onset of the heavy rain or thunderstorms. These warnings supplement the routine weather forecasts issued by the Royal Observatory by drawing attention to thunderstorms and heavy rain, and in particular to those thunderstorms which develop suddenly and were not previously expected.

The Service is designed to assist such people as engineers in charge of dams or tunnels, contractors on construction sites, and anyone else who is likely to suffer loss due to heavy rain or thunderstorms.

3. THUNDERSTORMS AND HEAVY RAIN

Thunderstorms, which may or may not be accompanied by periods of heavy rain, are a localized phenomenon. It is possible for intense thunderstorms to pass very close to the borders of Hong Kong without affecting the Colony itself, and thunderstorms observed to be moving towards Hong Kong may die out before reaching here. Similarly, a thunderstorm affecting one part of the Colony may not affect other parts. A thunderstorm warning therefore may appear to be a false alarm on some occasions, the storm either not reaching Hong Kong or affecting only a limited area within the Colony. In order to keep the number of false alarms to a minimum, no attempt will be made to give more than 6 hours notice of these storms. In the case of unexpected thunderstorms that are observed by radar or other means the warning may be as little as 1 hour or even less.

Each year a large number of thunderstorms will form which are isolated, have a life of approximately 1 hour, do not cause heavy rain (as defined here) and are local in effect. Also worthy of mention is the fact that lightning at night may be visible in Hong Kong although the associated thunderstorms are located many miles away over China or well out to sea. Neither of these two cases necessitate the implementation of precautions and thus flashes of lightning and isolated thunderstorms do not necessarily mean that a warning of thunderstorms will be issued by the Royal Observatory.

Prolonged heavy rain not accompanied by thunder and lightning is usually more widespread and associated with large-scale meteorological features more easily located and tracked than individual thunderstorms. Hence the arrival or development of heavy rain usually can be timed more precisely than can thunderstorms.

The following tables give statistical information on thunderstorms and rainfall recorded at the Royal Observatory. It will be noticed that in Hong Kong the heaviest rain and most thunderstorms occur in the summer months.

MONTHLY NORMALS OF THUNDERSTORMS FOR THE 20 YEARS 1947—1966

MONTH	No. of days with lightning observed	No. of days with thunderstorms	No. of thunderstorms
Jan.	<0.5	<0.5	<0.5
Feb.	<0.5	<0.5	<0.5
Mar.	1	1	3
Apr.	3	3	5
May	7	5	10
Jun.	9	6	9
Jul.	7	5	7
Aug.	10	6	8
Sep.	7	4	5
Oct.	1	1	1
Nov.	<0.5	<0.5	<0.5
Dec.	<0.5	0	0
YEAR	45	31	48

Note: The above statistics on thunderstorms relate to the Royal Observatory. The incidence of thunderstorms over the Colony as a whole will be higher than shown here.

Appendix VI—Contd.

MEAN NUMBER OF HOURS WITH RAINFALL AT THE ROYAL OBSERVATORY OF SPECIFIED INTENSITY

MONTH	NUMBER OF HOURS WITH RAINFALL AT RATE OF	
	10 mm per hour or more	50 mm per hour or more
Jan.	0.23	0.00
Feb.	0.35	0.00
Mar.	1.03	0.00
Apr.	2.91	0.07
May	7.01	0.23
Jun.	9.66	0.34
Jul.	8.82	0.20
Aug.	8.96	0.15
Sep.	7.23	0.07
Oct.	2.45	0.07
Nov.	0.79	0.00
Dec.	0.20	0.01
YEAR	49.64	1.14

MONTHLY NORMALS OF RAINFALL FOR THE 70 YEARS 1884—1939 & 1947—1960 EXTREME VALUES FOR 1884—1939 & 1947—1966

RAINFALL MONTH	Total		Duration of rain	No. of days with measur- able rain	Extreme daily maximum		Extreme hourly maximum	
	mm	in.	hr		mm	in.	mm	in.
Jan.	31.7	1.25	50	6	99.6	3.92	21.8	0.86
Feb.	46.9	1.85	66	8	86.1	3.39	24.6	0.97
Mar.	72.2	2.84	84	11	96.1	3.79	39.9	1.57
Apr.	135.8	5.35	82	12	190.2	7.49	67.6	2.66
May	292.7	11.52	91	16	520.6	20.49	86.4	3.40
Jun.	401.2	15.80	87	21	382.6	15.06	108.2	4.26
Jul.	371.7	14.63	72	19	534.0	21.03	100.7	3.97
Aug.	370.8	14.60	72	17	282.8	11.13	71.1	2.80
Sep.	278.8	10.98	59	15	325.5	12.81	84.0	3.31
Oct.	99.2	3.91	32	8	292.2	11.51	71.6	2.82
Nov.	43.1	1.70	31	5	149.2	5.87	44.2	1.74
Dec.	24.9	0.98	37	5	90.9	3.58	51.7	2.03
YEAR	2168.8	85.39	763*	143	534.0	21.03	108.2	4.26

* Includes unregistered drizzle.

TIME OF ISSUE OF WARNINGS

A warning will be issued when thunderstorms or heavy rain are expected OR are occurring in any part of Hong Kong and are likely to persist and affect other areas within the Colony.

A warning of thunderstorms or heavy rain will not be issued when Local Storm Signals are hoisted because it may lead to confusion. It should be noted that precautions against heavy rain should always be taken when such Local Storm Signals are in force.

5. CONTENT OF WARNINGS

The warning will specify:

- (a) Whether it is a warning
of THUNDERSTORMS
or of HEAVY RAIN
or of THUNDERSTORMS and HEAVY RAIN,
- (b) The time the thunderstorms and/or heavy rain are first expected to affect the Colony,
- and (c) The period for which the warning is effective.

Appendix VI—Contd.

If thunderstorms and/or heavy rain are likely to persist beyond the time stated in the warning then it will be renewed. Whenever possible the warning will be issued from 3 to 6 hours before the start of the thunderstorms or heavy rain but, as explained above, in the case of thunderstorms which develop unexpectedly, the warning may be as short as 1 hour or even less. Warnings will not be issued for the isolated type of thunderstorm described in para. 3 above.

6. METHOD OF DISSEMINATION OF WARNINGS

A warning issued by the Royal Observatory will be passed to:—

- (a) the Hong Kong Telephone Company who will contact everyone who subscribes to the telephone calling service,
- (b) the Government Information Service for issue to radio stations and to the press if the warning period makes it relevant.

7. TELEPHONE CALLING SERVICE

In order to reduce loss of life and damage it is essential that warnings of thunderstorms and heavy rain should reach those persons responsible for taking the necessary precautions without delay. Such people are often at work on construction sites or in offices away from radios and the latest newspapers. Thus special methods are required to ensure the timely receipt of warning messages. This is achieved by the "Telephone Calling Service" whereby the Telephone Company undertakes to pass all warnings of thunderstorms and/or heavy rain issued by the Royal Observatory directly and with the minimum of delay to those who subscribe to the service.

The charge made by the Telephone Company for this service is HK\$20.00 per annum and those who wish to subscribe should apply to the Company, stating whether they require a full 24-hour service or specifying between which hours of the day or night warnings are required.

8. NOTE

The introduction of the Thunderstorm and Heavy Rain Warning Service is one of many attempts by the Royal Observatory to increase the meteorological information available to the public. This particular service has been designed to meet the requirements of those who are likely to suffer loss of life or damage due to thunderstorms or heavy rain, enabling them to take the necessary precautions in good time. This service is new and the Royal Observatory will be pleased to consider any suggestions for improving its usefulness.

Like all forecasts, a warning of thunderstorms or heavy rain represents the most likely development in the weather and is subject to the usual errors of probability. There may be occasions when thunderstorms and associated periods of heavy rain develop suddenly and affect parts of the Colony before a warning is issued. It should be understood that whilst the Royal Observatory staff will do their best to avoid such occurrences, they cannot be held responsible for the result of either unwarned thunderstorms and/or heavy rain, or for the consequences of a false alarm.

ROYAL OBSERVATORY, HONG KONG

June, 1967

APPENDIX VII

EXTRACTS OF STATEMENTS ON THE PO SHAN ROAD DISASTER

(1) MR. ROBERT M. BRIDGE

"At approximately eight twenty I heard a tremendous roar. The programme, 'The Two Ronnies' had just started on T.V.B. I dashed to the amah's quarters to look out at Conduit Road. In the dark I could make out that the garage at 21, Po Shan Road was falling down the hillside. I could see the garage coming down but not the hill. I dashed back into the main room and yelled to my wife to lie on the floor and fell on top of her. Before I was completely on top of my wife the building shook and the lights went off. The building then twisted savagely to the left, towards Po Shan Road—the site (South west) and I knew that it was collapsed.

"I must have been knocked unconscious at some point of time, but when I regained consciousness I found that my body was pinned by rubble with my legs higher than my head but with my head in the fresh air. It seemed to me that I was right on top of the pile. My wife was in my arms and was obviously dead. There was a young Chinese girl, Kitty LEE, and she came and sat with me. I have no idea what time the rescuers arrived but I heard the sirens and quite soon after they arrived they heard the voices of myself and Kitty LEE. It took them, I suppose, 15 minutes to locate us but when they had done so they immediately removed Kitty LEE and attempted to dig me out. They removed my wife's body first and then managed to free me. They were extremely careful and clever in extracting me. I was then carried down to Babington Path, put in an ambulance and driven straight to Queen Mary Hospital."

(2) MR. CHIU CHI-POK

"The noise was not loud at first but became louder and louder—a matter of seconds passed. I ran towards the bedroom in which my wife was. At the same time she ran out of the bedroom and we met in the corridor between the study and the washroom. The building then began to shake just like an earthquake and the lights went out. Everything then started to fall down.

"It was about one minute after the collapse that it became very quiet.

"I found I was trapped but not seriously injured. Also my wife was not seriously injured. Both of us lay trapped. I could move certain parts of my body but could not get up. At the same moment I heard my children shouting and crying. Both my wife and I spoke to the children to calm them.

"On my chest was a door, the toilet door. My wife could feel a hole beneath her which she crawled through and which I also managed to climb through with the assistance of my wife who pulled my legs.

"After climbing through the hole I could see light. I crawled down about 10 feet guided by the voices of my children and then saw my daughter. My wife crawled a little further and found our son. I tried to help my wife to get my son out but heard noise of things falling and had to retreat back. There was a hole nearby through which I could see the sky. Through the hole I could see the house of the H.K. University Chancellor—before the collapse I was unable to as 'B' Block obstructed the view.

"The efforts to free my son were fruitless. I climbed through another hole with my daughter while my wife remained with my son. (During this time I heard my amah crying out but she had managed to reach safety before us).

"When I climbed out I met a man in a dark uniform and asked his assistance. This man had no torch or light but he climbed down the hole to assist my wife and son.

"This man was followed by other men in uniform and the first persons they brought out from the hole was a little girl and then a lady whom I know as Mrs. WONG, Dr. WONG's wife.

"From this same hole a boy was brought out, Jules McNEIL.

"At approximately mid-night I went to Queen Mary Hospital with my wife. My daughter was left with a Mrs. BROWN.

"My son was rescued while I was at the hospital."

(3) MR. HENRY LITTON

"I heard the noise what I thought was a small landslide up at Conduit Road. Myself, Mrs. McNEIL and the two boys went to the living room window facing Kotewall Road to see what had happened. Shortly thereafter I saw some bushes and trees between Kotewall Road and Conduit Road being flattened as if by a tremendous gust of wind and I realized something enormous was descending from the hillside. I ran together with Mrs. McNEIL and stood in the corridor and as far as I remember Mrs. McNEIL dragged Casper with her. I did not see which way Jules ran but I learned from him later that he ran towards the balcony. The next thing that happened was the floor seemed to buckle under me and the walls crumbled and then we were plunged in darkness. I was struck a glancing blow by an object on the forehead but as far as I know I did not lose consciousness. I did not realize that the whole building had collapsed. I myself was pinned down and I was lying on my left side and my right shoulder was pinned by part of a beam. My thigh and pelvis was pinned down by what appeared to be an enormous slab and I was totally immobilized. At this stage there was a very strong smell of gas which I thought was the fractured main leading to the bathroom. I called out to Mrs. McNEIL and she answered me. She was very concerned about the children and she appeared to be unhurt except she said she had difficulty in breathing. She said that she was pinned down and could not move. I heard a faint cry from Casper but I did not hear him again and realized he must have been very seriously injured. Mrs. McNEIL and I both shouted for Jules but there was no answer. From the direction of Mrs. McNEIL's voice I would estimate she would have been one or two yards away from me and slightly under the level where I was lying. I heard the voice of a Chinese lady shouting for help in Chinese. I told Mrs. McNEIL to keep very quiet and to breathe gently as the smell of gas was very strong. It was completely pitch dark in the place where I was trapped and I could not see anything and I did not realize how deep I was buried.

"I kept oral contact with Mrs. McNEIL and she was distressed and asked me several times how long it would take for the rescuers to come. The next clear recollection of these events was that a lot of water started to come in and I presumed it was raining heavily. I

Appendix VII—Contd.

can remember telling Mrs. McNEIL that it was a good sign as we were possibly not too deeply buried. All the time the smell of gas persisted. Shortly after the heavy rain I realized that a considerable amount of mud was being washed down to where we were lying. I could feel the mud gathering around my legs and up towards my body. My right fingers were free and I scratched to try to make a drainage for the water to run away. I was able to raise my head up to a distance of about 6" and as the level of mud and water rose I raised my head up. The mud and water level kept rising however and when I raised my head more mud would gather behind my head in fact wedging me in even tighter. The muddy water came up to the level of my mouth, then the rain abruptly stopped and quite quickly the muddy water receded.

"I shouted again to Mrs. McNEIL but there was no answer. I keep on shouting every 15 minutes or so but there was no response. Mrs. McNEIL at no stage complained to me that she was in pain and never indicated that she was badly injured except for the difficulty she had in breathing. I should state that all this time I myself was in very severe pain and tried to overcome the pain by diverting my thoughts by mental exercise.

"At some stage I heard the noises of the movement of what appeared to be lorries and heavy equipment. I had no idea of time and the intense pain blotted out any time sequence. I purposely did not yell out for help in order to preserve my strength when I knew help was near but about every 15 minutes I called out to Mrs. McNEIL.

"I did not hear any voices at all and the voice of the Chinese lady whom I mentioned was shouting for help was not repeated. After what appeared to be a long period of time I heard the faint sound of a radio coming from above me. I thought that it belonged to a rescuer so I shouted at the top of my voice for help and my calls were heard by a European who asked me to identify myself which I did and he asked me how many people were below and I told him there were four. He asked me which flat we were in and I told him 2B. We had some difficulty in communicating and his voice was not very clear. The European summoned help because shortly afterwards I could hear some more voices. I asked the person whom I first spoke to what time it was and I was most surprised to hear that it was 8 o'clock in the morning and that I had been buried for about 12 hours.

"The first daylight I saw was at 5 p.m. on 19th June, 1972. I should mention that during the time I was buried I heard the rumblings of further slides and this happened also during the operation to rescue me. I am not clear how the rescuers got to me as I was in total darkness. I am ignorant of the details of the rescue operation because most of the time I was pinned in total darkness. I realized the rescuers were running considerable personal risk because I heard the sound of at least 3 further slides during the course of that day.

"The first glimmer of daylight I saw was about 5 p.m. I was still pinned down by the slab over my thighs and the beam on my right shoulder. Eventually an officer of the Irish Guards, Lt. John GORMAN came into the cavity where I was and by use of an electric hammer broke up the slab over my head and freed my shoulder so that I could half sit up. Then he went to work on the slab pinning down my thighs. At the time I had been given an oxygen mask which Lt. GORMAN and I both made use of. Fire Services were also in the cavity where I was, working in relays to rescue me and Dr. PARK came in also just before I was extricated. At an earlier stage, Fire Services offered me an injection to kill the pain but I declined. I was finally extricated at about 9 p.m. on 19th June, 1972 and escorted to Q.M.H. by ambulance where I have been receiving treatment ever since. I later learned that Mrs. McNEIL and Caspar died in the disaster and that Jules had survived."

(4) MR. MICHAEL TIN-HTUN

"At approximately 20.45 hours we all heard a noise—just a noise, not too loud, sounding like things falling down—and we all knew it was a landslide. When I heard the noise I got up from the table and made my way to the bedroom as I wanted to look out of the window. Before I got to the window, I only managed to get to the door of the room. When the building started to shake, I knew immediately the building was collapsing. I hung onto the door frame and I heard screams. I was trapped by something slightly on my chest. I heard groans coming from my mother and my niece—the younger niece—screaming. I also heard other members of my family groaning—I cannot identify who. Also I heard other persons screaming. From where I lay I could see some light. I managed to speak with one person trapped below me but was unable to converse with other voices which I could hear. The person to whom I spoke was Miss Joyce YAO of Flat A, 6th floor. I lay trapped for approximately two hours. I had my watch on and when I was rescued it was 23.00 hours. It was a fireman who reached me first, a Mr. TSANG or CHEUNG. I was then taken to Queen Mary Hospital by ambulance.

"I was discharged after having stitches and went back to the scene at approximately 02.00 hours on 19th June, 1972.

"I could recognize the place I came out of and my own furniture and wall paper. I pointed this out to several firemen. The furniture which I identified as mine was practically at the top of the rubble looking from a North East angle. I also noticed my amah's bedsheets, my kitchen cupboard, and my children's play cot. Also in the rubble I identified a water container which we used during water shortage and a filing cabinet which was kept in the bedroom.

"Thinking back I remember seeing a European boy trapped by his legs whom I can recognize by sight, Jules McNEIL, living on the 2nd floor, Flat B. I also remember a naked woman was rescued before I was brought out and she kept on reporting that she was only visiting.

"When I was pulled out I remember seeing firemen and ambulance men. I do not remember seeing any policemen or military personnel. I did see a car belonging to the Civil Aid Services."

(5) MISS JOYCE YAO TSAI-YEE

"I was eating the lollipop and looking out of my window towards F. S. Li's garage and platform in Po Shan Road. The platform was built on stilts. I saw cracks in the platform since Saturday, 17th June, 1972. These cracks were on only two stilts. On Sunday, 18th June, 1972 the last stilt on the west side had bent. While I was looking out of the window there was very light rain, powdery. I then saw the garage near to the bent stilt slowly began to move and slide down the mountain. The time was about 21.00 hours. The garage slid

Appendix VII—Contd.

for about five seconds then started to tumble forward and it was at this time that the noise started. Not loud at first then I saw cracks appear in the wall of the amah's washroom which I could see through the window.

"I was then thrown from where I was standing to the other side of the room against a wall to wall wardrobe. While I was thrown there was an enormous bang. A few seconds passed as the world whirled around me.

"When everything settled (in my case) I realized I was lying on my wardrobe. I heard my brother shout for mother and I responded with, 'Anthony, Anthony'. I heard rubble falling but none fell on me.

"In my 'little cubicle' things were still, I was perfectly conscious. I could not move my head which rested on my right arm. There was a wall with wall paper on my right, which I could feel with my left hand. I could feel a Chinese trunk which did not belong to my family. There was a metal handle on the trunk. Except for this, I could see nothing else. There was no light.

"I call out and received an answering call from a Michael NG and we began to converse through a wall which divided us. The first thing we did was to exchange identification. He told me he was in the back room of Flat 5A and could see the sky through a closed window.

"It was a very long time before I heard the fire brigade noise. All the time I lay trapped I continuously heard pitiful yells from all directions. I also heard Michael Ng ask a lady without a dress on to open the window which I think he could see through. I also heard him cry out twice, 'Mr. THOMSON, Mr. THOMSON'.

"When I was rescued and taken to Kotewall Road it was 00.30 hours. I must have been trapped for three and a half hours. I was rescued by fireman. (Before I was rescued I heard an English speaking man tell a Chinese speaking man that he needed more men and a hammer).

"I was sent to Queen Mary Hospital where I was treated and discharged."

APPENDIX VIII

LIST OF FATAL CASUALTIES IN THE RAINSTORM DISASTERS (EXCLUDING THOSE WHICH OCCURRED AT SAU MAU PING)*

<i>Name of deceased</i>	<i>Sex/Age</i>	<i>Cause of death</i>
AT PO SHAN ROAD		
WONG Sze-kit	M/6	Crushed. Asphyxia.
WONG Kuen-chun	M/40	Crushed. Asphyxia.
Mrs. Angela BRIDGE	F/23	Deep open wounds of head and lower limbs.
Lo Woon-yeek	F/51	Crushed. Asphyxia with fractured left femur.
LIEU Tung-ching	M/53	Asphyxia.
Lo Kum	F/66	Head injury and multiple fractures of right humerus.
Li Kit-lai	F/16	Fractured skull and brain injury.
KOH Jui-hiang	M/40	Crushed. Asphyxia.
YAP Keow	F/61	Asphyxia.
Aw Poh-yeok	F/40	Multiple open wounds and fracture of left ankle.
Li Yau-kwong	M/40	Crushed. Asphyxia with laceration of scalp.
Li Kit-mei	F/17	Multiple fractures of shoulder joint and ribs.
LAM Chung-yau	F/41	Multiple injuries.
LEE Kit-wan	F/14	Asphyxia.
Malar WIN	F/14	Multiple injuries.
DAW Kyin-may	F/55	Multiple injuries.
POON Man-to	F/4	Multiple injuries.
POON Wai-man	F/2	Multiple injuries.
Li Yung	F/50	Multiple injuries.
WONG Mui	F/47	Multiple injuries.
LEUNG Wai	F/56	Multiple injuries.
WU Wun-chun	F/44	Multiple injuries.
Milan ONG	F/33	Multiple injuries.
Thida WIN	F/11	Multiple injuries.
Derrick TIN-NYUNT	M/34	Multiple injuries.
YAO Tien ming	M/60	Multiple injuries.
LAU Hing	F/59	Multiple injuries.
CHIANG Shiao-yang	M/59	Multiple injuries.
CHIANG Chuen-tung	M/27	Multiple injuries.
CHIANG SHUM Yi-pak	F/60	Multiple injuries.
YING Wing-sze	F/30	Multiple injuries.
Caspar Ian McNEIL	M/7	Multiple injuries.
Li Chik-sang	M/15	Multiple injuries.
TANG Man-chung	M/64	Asphyxia.
Jennie YEN Chung-yeek	F/28	Asphyxia.
Mrs. Annemaria McNEIL	F/28	Asphyxia.
YEN Pei-chi	M/58	Asphyxia.
YEN CHANG Jyn-ling	F/55	Asphyxia.
CHIU Chui-ping	F/47	Asphyxia.
KOO Wei-leung	M/3	Asphyxia.
KOO Teh-cheung	M/48	Asphyxia.
KOO Wai-tong	M/6	Asphyxia.
Satoru HARADA	M/40	Asphyxia.
Mayumi HARADA	F/6	Asphyxia.
Mrs. Teiko HARADA	F/35	Asphyxia.
TANG Yuen-han	F/37	Cerebral laceration.
Helen LOKE	F/60	Cerebral laceration.
LIEU Yuen-ying	F/17	Multiple injuries with decapitation.
CHING Ngan	F/57	Multiple injuries.
Katie YAO CHUI Hui-khiu	F/50	Multiple injuries.
TONG Sau-wan	F/68	Multiple injuries with crushed cranium.
SHEN Chung-sing	M/53	Multiple injuries with crushed chest wall and skull fracture.
LEE Sze-wai	M/61	Multiple injuries and fractured skull.
SHEN Chung	M/16	Multiple injuries.
CHANG Tsek-ming	M/58	Multiple injuries.
LOO Yu-jin	F/60	Multiple injuries.
CHANG Kai-yu	F/16	Multiple injuries.

* The names for each disaster area are listed in the order of identification.



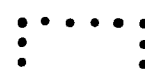
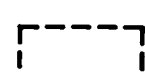
Appendix VIII—Contd.

<i>Name of deceased</i>	<i>Sex/Age</i>	<i>Cause of death</i>
YEE Pin-nee	F/56	Multiple injuries.
KING Nine-poo	F/44	Multiple injuries.
HOU Shi-kwan	F/15	Multiple injuries.
HOU Chi-hsiung	M/50	Multiple injuries.
Jean-Claude THOMAS	M/39	Multiple injuries.
Lo Wai-kiu	F/32	Multiple injuries.
Ho But-hung	M/46	Multiple injuries.
POON Shun-sik	F/69	Crushed. Injury of chest.
Ho Yin-yee	F/11	Crushed. Injury of skull.
HUI Foon	F/61	Multiple injuries.
AT SHIU FAI TERRACE		
Lo Yiu-shing	M/26	Crushed. Asphyxia.
AT AP LEI CHAU		
Woo Choi-mui	F/49	Crushed. Asphyxia.
IN BELCHER'S STREET (WESTERN DISTRICT)		
NG Wing-shing	M/19	Crushed. Asphyxia.
IN BULLOCK LANE (WAN CHAI)		
WONG Choi-king	F/47	Multiple injuries.
WONG Yiu-sing	M/14	Asphyxia.
TONG Yu-chun	F/17	Asphyxia.
AT CHAI WAN		
SIN Yuen-keung	M/17	Asphyxia by drowning.
AT SHAU KEI WAN		
MUI Hoi-man	M/39	Cerebral contusion.
WONG Kam-fong	M/3½ yrs.	Cerebral laceration.
CHAN Hing	M/33	Cerebral laceration.

PO SHAN ROAD DISASTER AREA

LEGEND

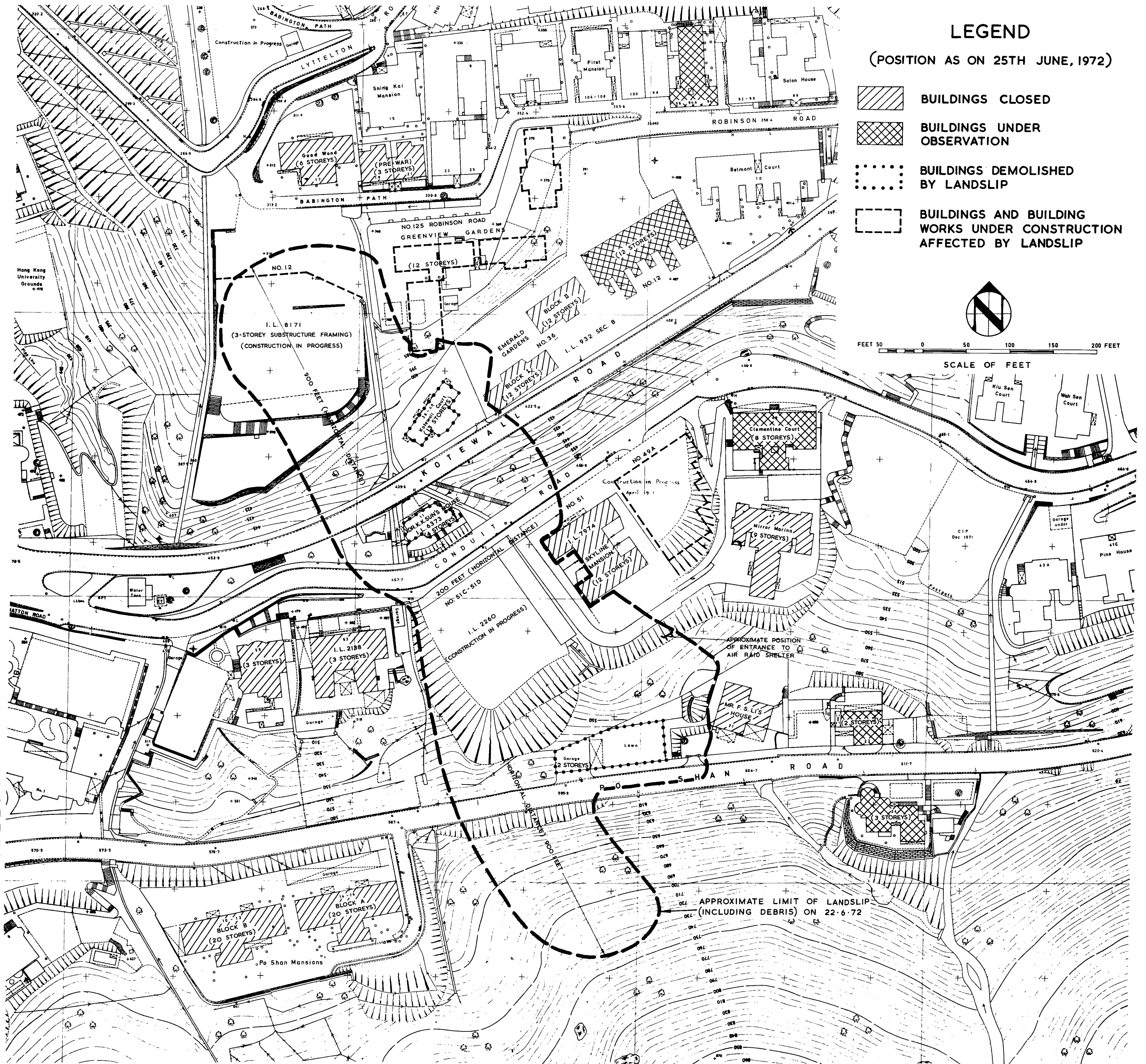
(POSITION AS ON 25TH JUNE, 1972)

-  BUILDINGS CLOSED
-  BUILDINGS UNDER OBSERVATION
-  BUILDINGS DEMOLISHED BY LANDSLIP
-  BUILDINGS AND BUILDING WORKS UNDER CONSTRUCTION AFFECTED BY LANDSLIP



FEET 50 0 50 100 150 200 FEET

SCALE OF FEET



APPENDIX X

GENERAL INFORMATION ON EMERGENCY CALLS

An emergency telephone operator answering an emergency call will, in Cantonese followed by English, say "Police 999, which service do you require—police, fire or ambulance?" If police services only are required the operator obtains particulars of the incident, whilst at the same time another operator is monitoring the call. The monitoring operator, when obtaining details, simultaneously directs by radio the nearest police vehicle to the scene of the incident. Whilst the first operator is obtaining details the police vehicle is on its way to the scene, thus avoiding any delay. In some cases the vehicle may well arrive before the caller has finished the telephone conversation.

2. If fire or ambulance services are required the telephone operator immediately switches the emergency call direct to the appropriate control. As with police services another operator listens to the call and, when obtaining details, simultaneously directs by radio the nearest police vehicle to the scene of the incident. Again it is possible that the police vehicle will arrive before the call is finished and before the fire engines or ambulances arrive. Police vehicles are constantly patrolling the roads and may well be only a few yards from an incident when a call is made. Fire engines and ambulances are stationed in their respective depots and normally will have to travel greater distances than police vehicles.

APPENDIX XI

STATEMENT OF MR. TERRENCE A BERRE CLOTH ON THE PO SHAN ROAD DISASTER

I, the above stated, live at apartment 2B, 61, Mount Kellett Road.

2. On the night of the 18th June, 1972, I was at home and heard a radio broadcast mobilizing all auxiliary firemen—the nine o'clock news. I realized that a major disaster had occurred though I am not a member of any disciplined force in the Colony. I have previous experience in rescue work—mountain rescue and plane crash. Also have experience in train disaster and can use a cutting torch which is invaluable in these sort of things. I put my heavy boots on, took a torch, rock pick and then drove down to Po Shan Road.

3. The road was blocked by an overturned police vehicle. A man in the crowd who had just come up the hill from Kotewall Road indicated that a number of occupied buildings had collapsed. I then made my way down to the Conduit, Kotewall Road junction where both Police and Fire Services were in the process of organizing rescue operations along Kotewall Road. I then felt that I couldn't be of much help in this area so I drove back out down to Robinson Road to check how far down the hill the landslip had effected. This led me to Green View Gardens where one senior fire officer and approximately five or six firemen were engaged in searching the rubble—let's say there were five or six torches but within a few minutes this number increased to something like twenty. The time could not have been outside twenty past nine.

4. At about this time or a little later two senior fire officers arrived on the scene to check the situation and then left.

5. I offered my services to the senior officer on sight and was told should I be required he would call on me. I then surveyed the area and made an appraisal as to where I thought the most likely situation for survivors would be.

6. There were some large unbroken floor slabs wedged in the corner against the building that had lost the top and it occurred to me by entering this building it would be possible to view the debris by cross section. I mentioned this to a fire officer and he arranged to obtain the main entrance key.

7. We entered the building, investigated the power supply, find source of light. This was not possible due to the very temporary nature of the wiring. Together with a fire officer we entered the first floor of an apartment and moved into the northern most room facing the rubble.

8. At about this time two fire officers arrived in the Apartment with calor gas lamps. After a short while these were removed possibly due to the fact there was a strong smell of gas in the area. I then called and alternatively listened into the rubble. (At this time there was considerable activity over towards the west and the bottom part of the pile where a number of bodies/victims were discovered).

9. After listening quietly I thought I heard a cry or possibly a noise made by a cat. I then called a fire officer back to the scene who waited with me and called several minutes without any response. He left the room to attend to other urgent work. I continued calling, finally getting a response. I then located the same fire officer who on returning to the room also heard the sound. By torch light we identified a woman some six or eight feet inside the rubble and at this time heard a second voice lower down. Almost immediately a rescue party was organized who located and rescued the woman from the lower area.

10. The second rescue party was organized and initially supervised by the senior fire officer. Firstly they attempted to cut the web of concrete and steel that prevented direct access to the victim—an older woman, an amah? who was scantily dressed.

11. Approximately this time or possibly prior to the rescue of the young woman a motor generator was started providing light. The cutting of the concrete was extremely dangerous. This operation took approximately thirty minutes and the firemen involved in the operation showed considerable courage. Throughout this time I was providing some torch light and offering what I thought to be useful suggestions.

12. With considerable skill the woman still alive was removed and placed on a stretcher finally collected by an ambulance.

13. After the woman was removed it was possible to see a Chinese male, twenty to thirty years. I was advised this man was dead by one of the firemen who had rescued the woman. It appeared to me several steel rods either passed through the body or were binding the body to the debris. He was in his pyjamas. The elder woman was rescued very close.

14. At the time the woman was being rescued a number of soldiers started digging at the bottom of the pile with several of their officers climbing the main pile up to Kotewall Road.

15. After the rescue of the woman I suggested to a number of fire officers to break down a door leading to an open area. The top of the open area was covered with a canopy of debris. Shortly after this, I left the scene.

16. The enthusiasm and courage of the firemen working at the scene was hampered by the lack of suitable equipment.

(Signed) Terrence A. BERRE CLOTH

(Signed) F. J. ERASMUS

At 11.25 hours on 5th July, 1972

APPENDIX XII

STATEMENT OF MR. GUY S. SHIRRA ON THE PO SHAN ROAD DISASTER

I am Guy Sanderson SHIRRA. I have been in the R.H.K.P. for 5½ years. I am presently working at Fanling Court, 9 a.m.-5 p.m., and live at Flat B-10,5th Floor, 25, Park Road, Hong Kong.

2. On the evening of Sunday, 18th June, 1972, I was on weekly leave and at home watching T.V. I did not hear any noise until about 20.55 hours when an ambulance with siren went up Park Road and up the hill via Lyttelton Road. It was followed at closed intervals by several other emergency vehicles and ambulances and I could see people in the flats behind on their balconies looking towards Kotewall Road. This continued until about 21.10 hours and, realizing that something serious had happened, I telephoned Upper Levels Station Report Room. An Inspector on duty informed me briefly that there was a report of "House Collapse" and I rang off. I then dressed fittingly and left home at about 21.15 hours. It was still raining fairly heavily. At first I took my car, drove to Lyttelton Road, but on seeing Traffic Police turning cars back, I returned to park the car at home, and then ran up to Kotewall Road where there were a fair number of emergency vehicles (10-15?). The road was thick with mud, and it was dark. I could see a very large landslide across the road. I entered a block of flats via a garage or entrance hall, went through to the back and climbed up a large bank of mud to where there were several firemen. I think there were about 30 where that I could see.

3. I then identified myself to a Senior Fire Officer there (Mr. ELSWORTH) and offered assistance. Just then, the Chief Fire Officer Hong Kong Island, Mr. Fred JACKSON spoke to Mr. ELSWORTH and told him that he would get the C.S. to declare it a disaster. At the time several firemen were pulling 2 or 3 survivors from top of the rubble, and were moving aside a refrigerator with ropes. I had a torch myself and at this time the firemen had only hand torches; more spades were brought together with crowbars and saws. There was quite a strong smell of gas, and Mr. ELSWORTH gave a warning not to smoke. He then instructed 4 men to go down the left side of the rubble to look for survivors. Here, there was a strong stream of mud and water flowing down from above, and the ground was very unstable. At first they misunderstood and only looked around at the top, so I told Mr. ELSWORTH and I then went down on a rope with one other fireman. I went down the left side about 30 feet to where the concrete overhung a flatter gap in the rubble before it continued down the hillside. It was a mass of debris and twisted metal bars and wires there. Immediately we saw in our torch lights a naked Chinese woman who was slightly injured but sitting completely free on the rubble. She was taken up by a third fireman. Just then I heard a young European boy's voice call out "Help me, help me, I'm dying" very close by. I then searched with my torch and saw a hand sticking out and a face just visible. I climbed into the rubble beneath the overhanging concrete and bars to where he was and found that he was completely buried and lying face down jammed under a bookcase with concrete above and squashed against a board and a large piece of concrete below. He was very firmly embedded. I calmed him and asked his name after clearing his head of rubble and he told he was Jules McNEIL and that he had been on the 2nd floor with his mother (Anna Marie), young brother (Kaspar) and Henry LITTON. I could see no sign of anyone else near him and could hear no one else calling for help. I then told the firemen to tell Mr. ELSWORTH that we would need help in getting the boy out. I lost my torch and was given another by two firemen who assisted me in removing debris from beneath the boy. (KWONG and LEE?) Eventually, it was clear that the boy was mainly pinned by the right elbow and around the waste and hips. He was in some pain, and I therefore asked if a doctor had been called and this was confirmed. The two firemen and myself were then joined by Mr. ELSWORTH and shortly afterwards another fireman arrived with a portable arc lamp and remained holding it until the boy was eventually extracted. Mr. JACKSON also visited the scene. We then commenced sawing at the wooden furniture holding the boy and were able to free him down to the waist.

4. A doctor KAN (Q.M.H. Casualty) arrived and gave the boy an injection of morphine at about 22.30 hours, and at this time I noticed the presence of C.A.S. and it was evident that other survivors had been found lower down. We then continued extricating the boy, who was very drowsy, after the injection, and used saws to cut away the bookcase and rattan furniture around him. Further work revealed that his left leg was doubled back over the wood and his right foot was strongly jammed in the debris.

5. At about 23.30 hours we called for a pneumatic wedge and the first one that arrived (a C.A.S. wedge) did not work. A Fire Service wedge was brought about ten minutes later, and after several attempts at freeing his right foot, we were successful and we were able to slide the boy out about 00.10 hours. We then carried him up the hill, using the ropes, with extreme difficulty and handed him to a fireman near the top. There we were blinded by flashbulbs which didn't help. (The photographers had earlier been warned off for this reason). Jules was then put onto a stretcher and we examined him again and affixed a saline/glucose drip.

6. We then put him into an ambulance outside and Dr. KAN joined me. The ambulance drove to Q.M.H. with a blue light but no siren as there was very little traffic. It arrived at Q.M.H. at about 00.30 hours where he was immediately attended to by doctors. There were also 3 European matrons present, and it was obvious that they were well prepared for the emergency. A splint was fixed to his left arm and he was x-rayed and admitted to the orthopaedic ward and later transferred to the intensive care unit for non-function of kidneys. (He is now recovering well in ward E1).

7. I later returned to the scene at about 02.30 hours, and I found that generators had been set up for arc lamps, thoroughly lighting the whole scene where the Army were involved in the digging. P.T.U., C.A.S. and Fire Services were present with further ambulances. I remained for a time, and observed as further assistance was obviously not required. I left at about 03.00 hours.

8. I have the following observations to make:—

- (a) all the rescuers, particularly the Fire Services were extremely enthusiastic and efficient in their work;
- (b) the rescue work necessitated slow, careful digging with hands and small implements; large equipment would have been useless and dangerous.

G. S. SHIRRA, S.I.P.
O.C./Fanling Court

APPENDIX XIII

THE RESCUE OF MR. HENRY LITTON

At about 8.15 a.m. on June 19, 1972 Divisional Officer A. S. CONWAY, Fire Services Department, surveyed the upper section of the Kotewall Court wreckage to see if there were signs of life. Suddenly he heard the sound of a radio from inside the debris. He shouted but there was no reply. He was about to leave when he heard a "definite, muffled voice" from beneath the rubble. He shouted in Cantonese and heard a man reply in English, saying that he and three other people were trapped inside. The person identified himself as Henry LITTON. Mr. CONWAY reassured him and went away to obtain assistance and equipment.

2. On returning to the spot Mr. CONWAY cleared the site carefully and, together with a member of the Royal Engineers, began to dig a tunnel to reach Mr. LITTON. At about that time Mr. F. JACKSON, Acting Chief Fire Officer (Hong Kong), arrived and was informed of the situation.

3. Since only one person could work in the tunnel at one time, Mr. CONWAY alternated with the member of the Royal Engineers until the arrival of other Fire Services personnel at about 9 a.m. The debris had by then been tunnelled to about six feet. The tunnel was approximately 18 to 24 inches in diameter and was dug at an incline in the general direction of where Mr. LITTON was thought to be trapped. The debris around the tunnel opening was unstable and susceptible to movement. Working conditions were poor for lack of space and natural light. Hand-torches were the only means of illumination, and the rescuer had to lie prostrate with his head inclined downwards.

4. Tunnelling was done mainly by hand. Earth and concrete lumps were broken up and moved from the tunnel which eventually became long enough to permit two men to enter in single file. The man in front passed the debris to the man behind him, and this was then passed out of the tunnel. Mr. M. K. LANE, Chief Fire Officer (Prevention), the officer then in overall control of operations at the Po Shan Road disaster site, was also kept informed of the progress.

5. During the digging operation the rescuers occasionally spoke with Mr. LITTON in order to ascertain his location, physical condition and state of mind. The rescuers had by then excavated a vertical shaft of some six to seven feet deep and a horizontal tunnel of some 20 to 25 feet long. During the excavation a ceiling fan was encountered, the blades of which were subsequently either broken off or bent to make way for the tunnel. By that time the rescuers had reached Mr. LITTON and his right forearm was exposed. Further excavation revealed that the small of his back was pinned down by a baulk of timber, and the lower part of his body by a gas water-heater, both of these objects being firmly set in the rubble. The rescuers managed to free Mr. LITTON from these objects after much effort. They continued to remove the debris from his back and disposed of it in a plastic container which was subsequently passed out of the tunnel.

6. The rescuers had to work extremely carefully using bare hands and small handtools, as any mishandling of the debris might cause a collapse of the tunnel area.

7. Mr. L. WORRALLO, Assistant Chief Fire Officer (Hong Kong) arrived at the scene at about 1.30 p.m. and assumed command of the rescue work.

8. A Medical Officer who had been summoned arrived at about 3 p.m. Mr. LITTON was offered an injection of morphia, but he declined, asking that it be withheld for the time being. By now he had been supplied with an oxygen/air mixture via a 25-foot extension tube for some time.

9. At about 3.30 p.m. a further landslip occurred some distance away and the rescue site was urgently evacuated. However, the slip did not affect this site and work resumed shortly afterwards. Some rescuers were on the lookout for further slips and those working in the immediate area were reduced to a minimum. Nevertheless, during most of the time three persons were working in the tunnel and at least three others at the mouth feeding in oxygen and equipment. Mr. LANE discussed the situation with the rescue officers and stressed the need for urgent extrication of Mr. LITTON. Various items of power equipment were also ordered. As Mr. LITTON's lower limbs were still firmly trapped by what was thought to be a concrete beam the possibility of the amputation of his lower limbs was discussed. In fact, Mr. LITTON himself agreed that this might well have to be done in order to save his life if the worst should happen.

10. The rescuers broke up a slab above Mr. LITTON's head and shoulder so that he could half sit up. Further excavation revealed that his legs were still trapped by a wash-basin. The rescuers succeeded in cracking this some time after 6 p.m. and gradually broke it up into small pieces, thereby largely freeing Mr. LITTON's legs. Eventual extrication was then only a matter of time. His condition had, however, deteriorated and he was apparently suffering from acute depression.

11. Fresh rescuers took over at about 7.30 p.m. Work having progressed smoothly for some time, it was suspended briefly when a doctor was permitted to enter the tunnel and talk with him. At that time Mr. LITTON had been almost completely freed except for the lower part of his legs. A rope was placed around him ready for subsequent extrication through the tunnel. Rescue work resumed shortly and Mr. LITTON's legs were soon freed. The rescuers then adjusted the rope round his chest and placed him in the correct position for extrication. They made every effort to avoid further injury to him as his limbs were numb. They finally extricated him at about 9 p.m. and took him to Queen Mary Hospital.

12. Those who took part in the rescue comprised members of the Fire Services Department and the Army, specifically the 1st Battalion Irish Guards and Royal Engineers.

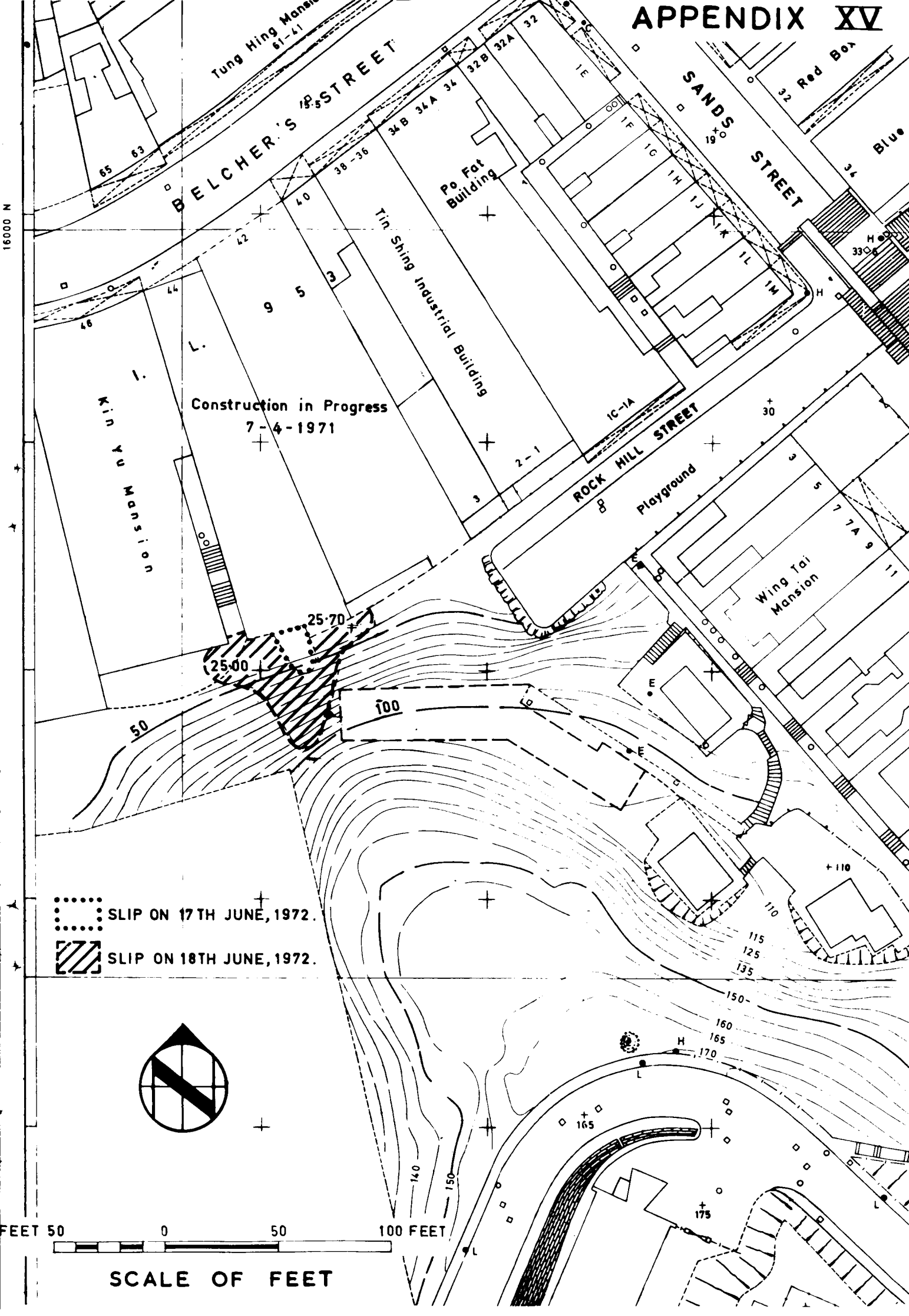
13. Whilst all those who were engaged in this rescue work merit commendation for their part in this difficult and dangerous task, several should be especially mentioned, viz., Acting Divisional Officer J. A. HIGGINS, Divisional Officers A. S. CONWAY and CHEUNG Shu-shing, Acting Assistant Divisional Officer TSUI Hin-king and Station Officers Lo Shiu-kuen and LEUNG Shiu-kay, all of them members of the Fire Services Department.

APPENDIX XIV

REMEDIAL WORKS PERFORMED AFTER THE PO SHAN ROAD DISASTER

Since June 19, 1972 the following works have been completed by the Highways Office of the Public Works Department:—

- (a) The construction of two catch-waters above the Po Shan Road slip which were designed to divert all surface water run-off into the arterial nullah running to the east of 24, Po Shan Road.
 - (b) The blasting of dangerous boulders on the slip face.
 - (c) The clearance of Conduit Road down to its original alignment and level (which was opened to through traffic on July 5, 1972).
 - (d) The spraying of the slip face with a cement/Bentonite solution to prevent the infiltration of rain-water into the soil.
 - (e) Dewatering by means of well points.
 - (f) The construction of temporary cross-road drains and stepped channels in the landslip area.
 - (g) Diversion of all storm-water drains and sewers away from the landslip area.
 - (h) Site investigation by percussion bores.
2. The following works are still in progress under the direction of the Highways Office of the Public Works Department:—
- (a) Dewatering by means of vertical caissons.
 - (b) Clearance of a blocked nullah near Babington Path.
 - (c) Site investigation by drill-holes.
 - (d) Driving of headings into the slip face to relieve any pore-water pressure.
 - (e) Detection of surface ground movement by means of slope indicators.
 - (f) Detection of sub-surface soil movement by means of slope indicators.
 - (g) Removal of dangerous boulders on the virgin slope above the slip face.
 - (h) Clearance adjacent to 51, Conduit Road, Skyline Mansion.
 - (i) Clearance below Conduit Road to locate 11, Conduit Road.
3. Permanent remedial measures for the restoration of the area are under consideration by the Public Works Department.



Tung Hing Monastery 61-41

BELCHER'S STREET

SANDS STREET

Po Fat Building

Tin Shing Industrial Building



ROCK HILL STREET

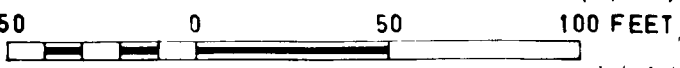
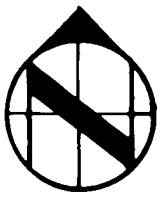
Playground

Wing Tai Mansion

Construction in Progress
7-4-1971

KIN YU MANSION

-  SLIP ON 17TH JUNE, 1972.
-  SLIP ON 18TH JUNE, 1972.



SCALE OF FEET

16000 N

JOHNSTON ROAD

WAN CHAI ROAD

BULLOCK LANE

BURROWS STREET

CROSS STREET



SLIP ON 17TH JUNE, 1972.



Ruttonjee Sanatorium

FEET 50 0 50 100 FEET

SCALE OF FEET

Laundry

Latrine

WATER WORKS DEPOT

Wah Tao Building

Southwestern College

Cathay Theatre

Wan Chai Building

Ming Tak Building

Chung Wui Mansion

Prime Mansion

133-187

189

191-195

176A-176D

110-114

116 118

178

180

182

184

186

124-126

128-150

93-99

101-103A

107-111

113

115

117

119

121

123

I.L. 8186

I.L. 8187

I.L. 8300

I. L. 437

I. L. 2

I. L. 661

125

I. L. 611

I. L. 662

127-135

141

143

145-149

15

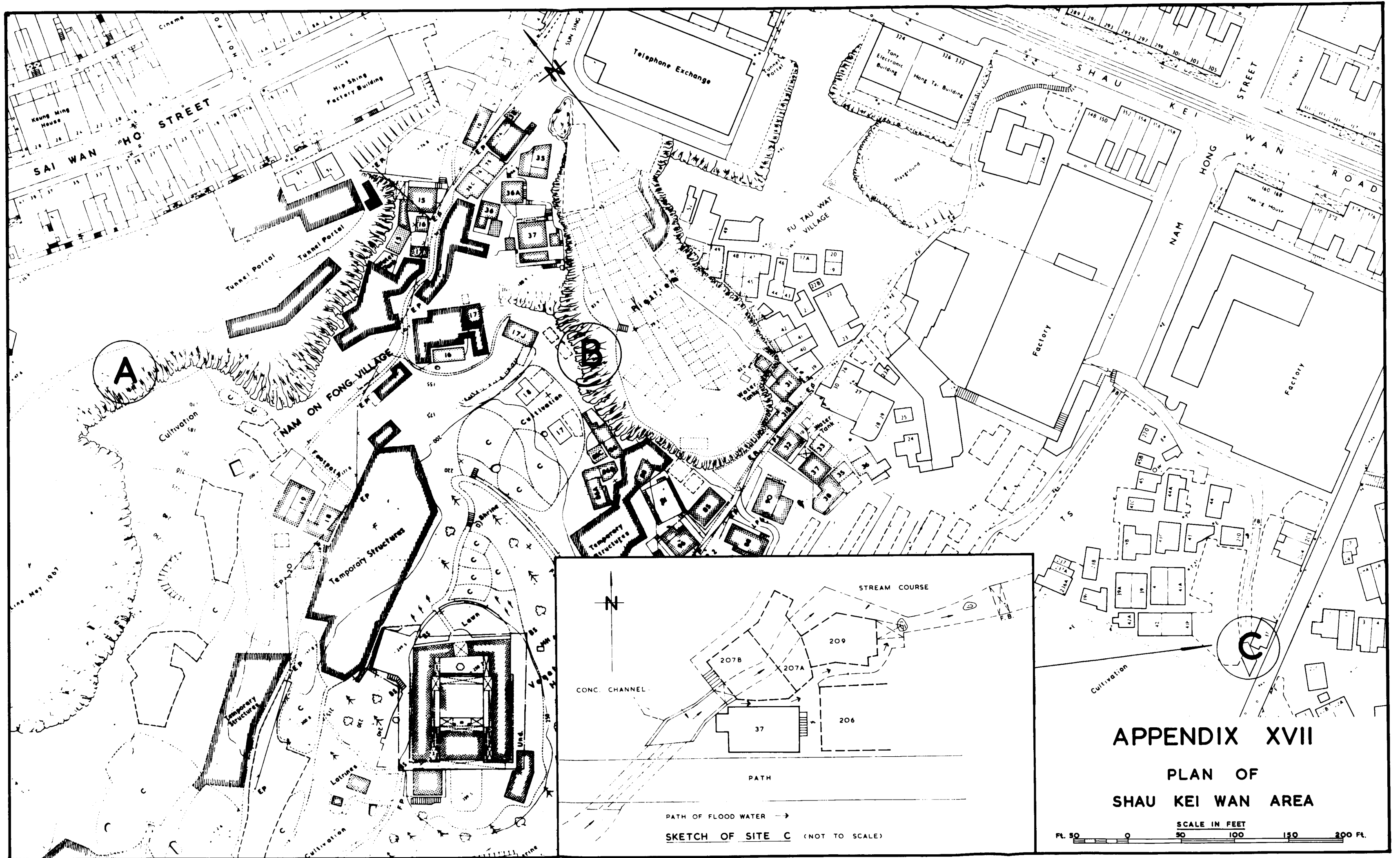
17

19

21

7

Teleph Exchange



APPENDIX XVII
PLAN OF
SHAU KEI WAN AREA

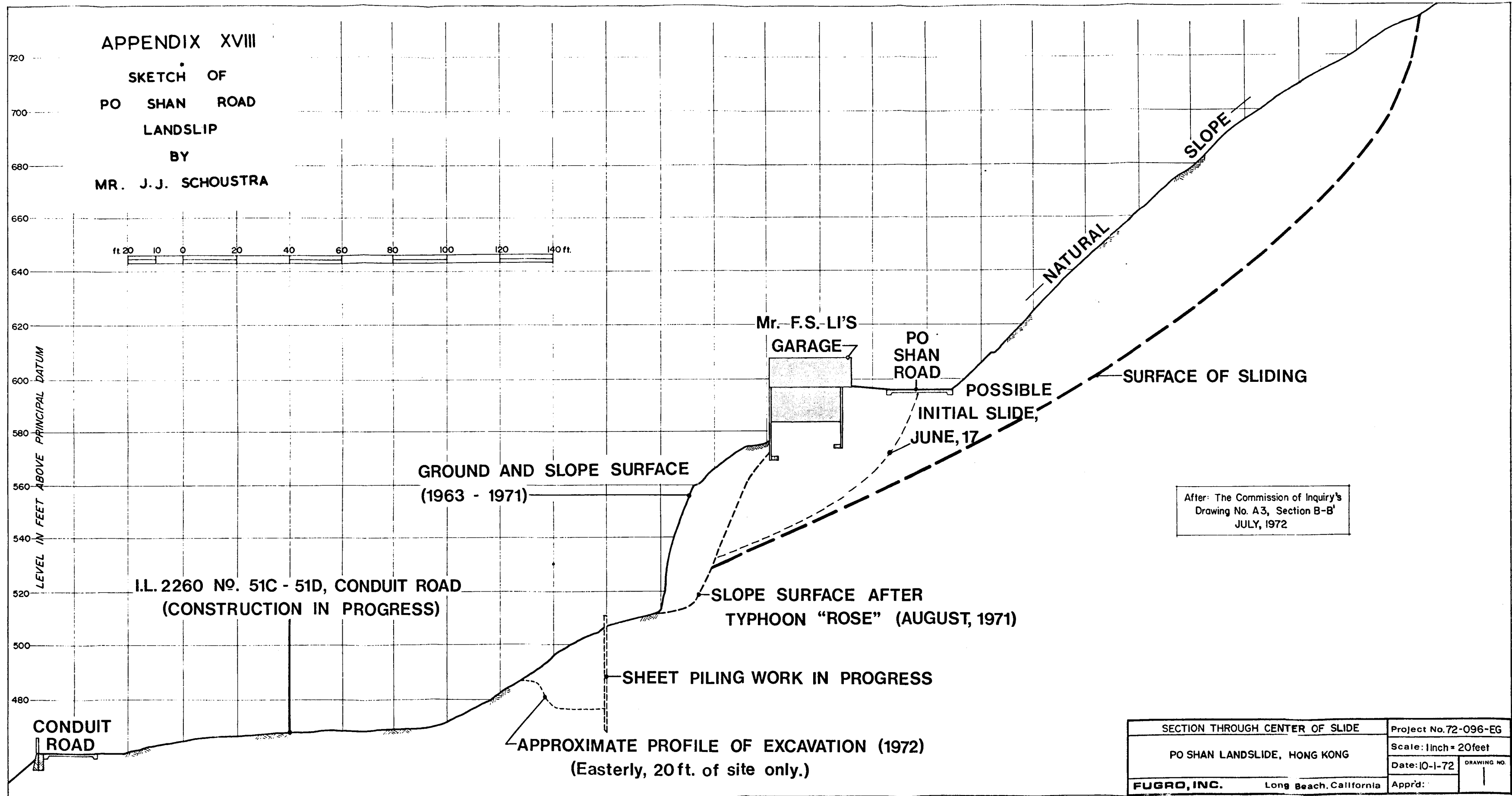
SCALE IN FEET
 0 50 100 150 200 FT.

APPENDIX XVIII

SKETCH OF
PO SHAN ROAD
LANDSLIP
BY
MR. J. J. SCHOUSTRA

LEVEL IN FEET ABOVE PRINCIPAL DATUM

ft 20 10 0 20 40 60 80 100 120 140 ft.

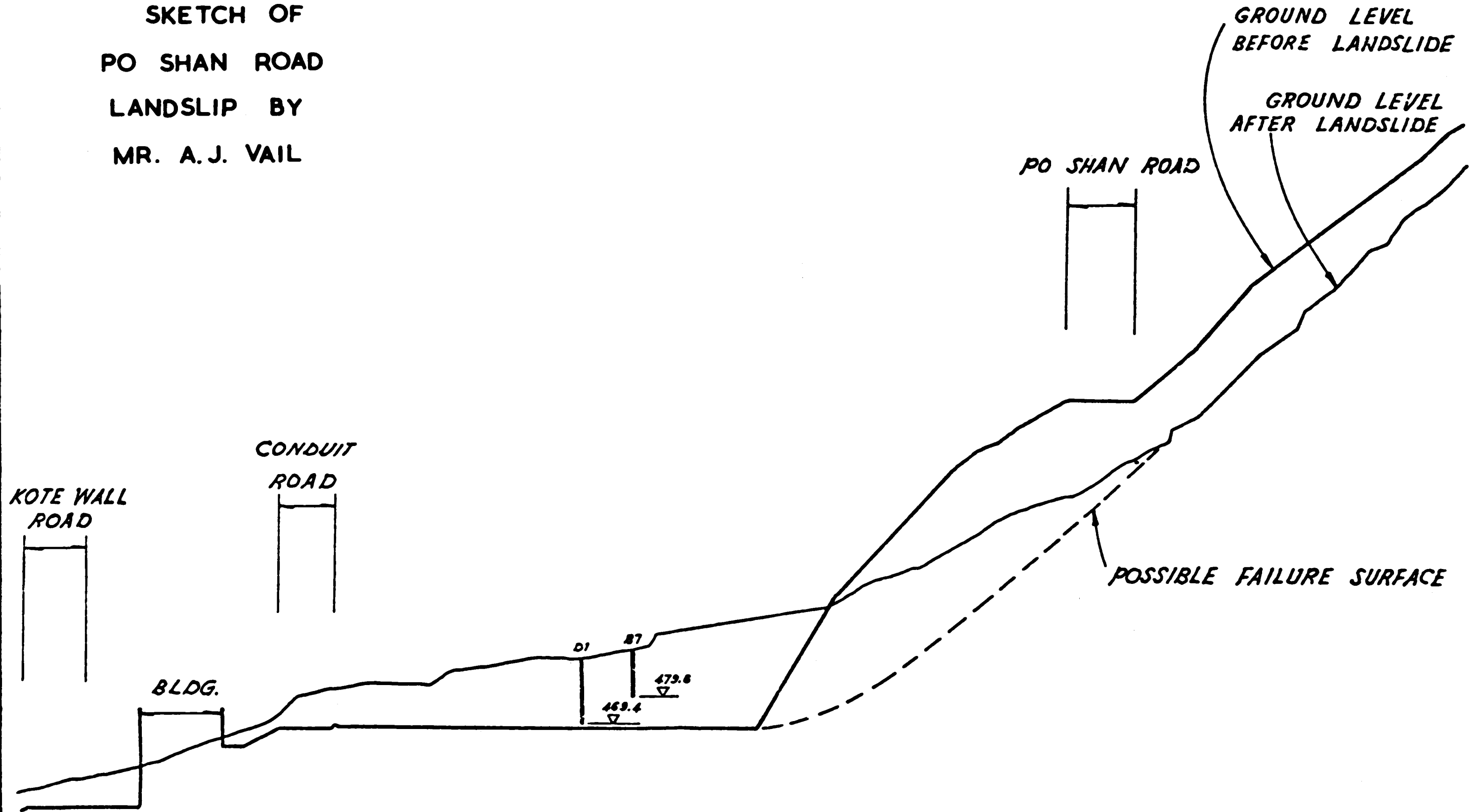


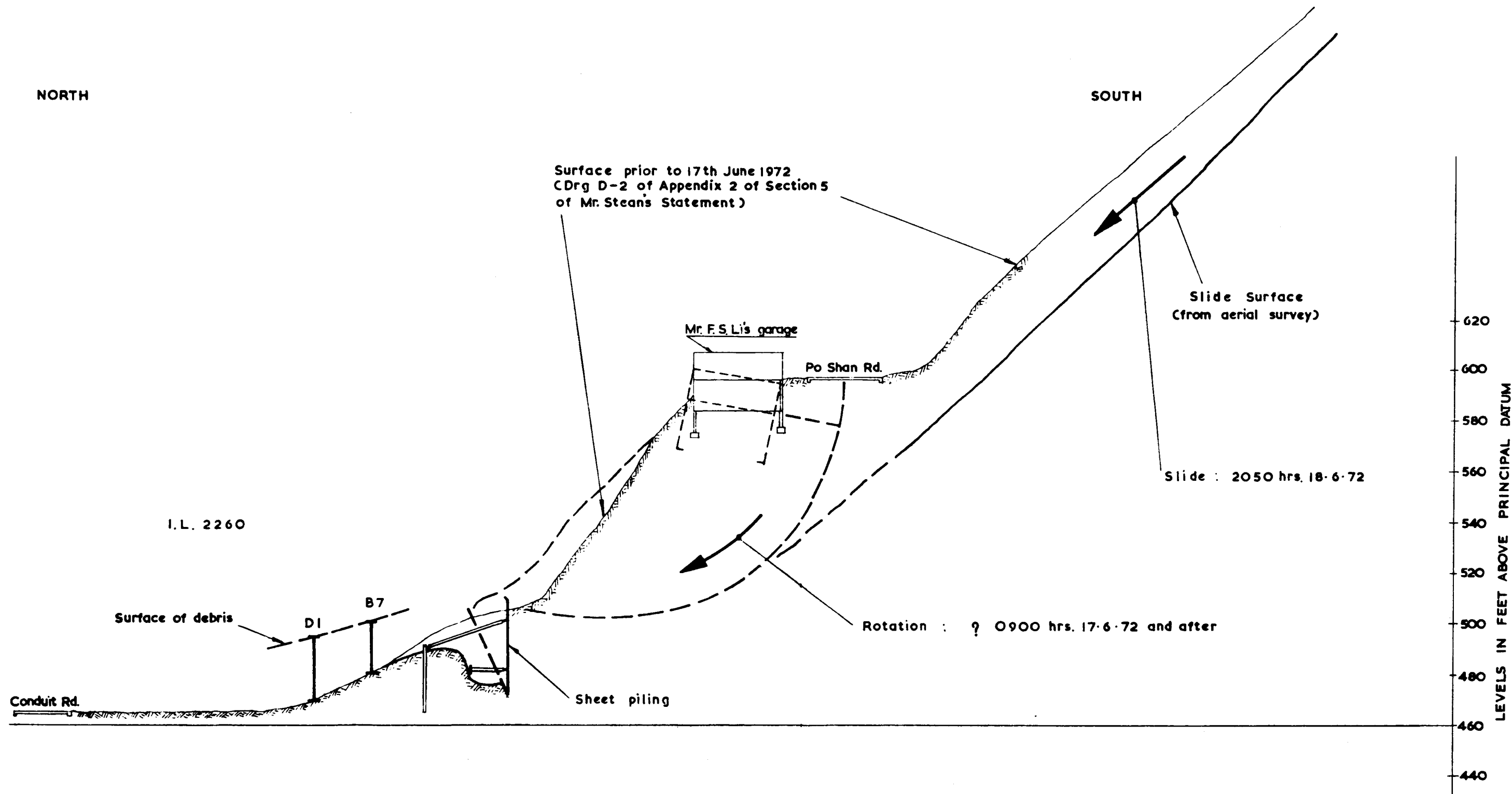
After: The Commission of Inquiry's
Drawing No. A3, Section B-B'
JULY, 1972

SECTION THROUGH CENTER OF SLIDE		Project No.72-096-EG
PO SHAN LANDSLIDE, HONG KONG		Scale: 1Inch = 20feet
FUGRO, INC. Long Beach, California		Date: 10-1-72
App'd:		DRAWING NO. 1

APPENDIX XIX

SKETCH OF
PO SHAN ROAD
LANDSLIP BY
MR. A. J. VAIL





APPENDIX XX

Sketch of Po Shan Road landslide

by Mr. K.A. Phillips

Scale : 40 ft. to 1 in.

(Note: All information shown is approximate only)

APPENDIX XXI

EQUIPMENT USED BY THE FIRE SERVICES

PNEUMATIC AIR-BAG

1. A pair of pneumatic air-bag connected to an ordinary compressed-air cylinder in operation after inflation, giving a total lifting force of 8,480 lbs. to lift e.g. a vehicle from ground.

TIRFOR—A HAND-OPERATED WINCH

2. A fireman in action to operate a Tirfor for pulling objects by manually operating the handle of this device to shorten the wire. A maximum pulling force of three tons horizontally and one and a half tons vertically can be provided.

PRY-AXE

3. An axe consisting of various components, including an axe blade with serrated teeth, a pike, a claw and a detachable handle for levering, is used for general breaking-in purposes.

LARGE BOLT CROPPER

4. For general cutting of iron wire/rod up to $\frac{1}{2}$ in. diameter.

CHISEL

5. (Self-explanatory).

CROWBAR

6. For general digging and levering purpose.

10-LB. HAMMER

7. (Self-explanatory).

10-TON PORTO-POWER

8. A 10-ton hydraulic porto-power with ancillary equipment can be set up into various combinations for performing clamping, pushing, pulling and spreading duties.

50-TON PORTO-POWER

9. A 50-ton hydraulic porto-power which consists mainly of a manually operated hydraulic hand-pump connected via a high pressure tube to a ram, may be used to perform lifting duties.

RESUSCITATION APPARATUS

10. A resuscitation apparatus is used for applying oxygen/air-mixed oxygen to a person to effect artificial respiration by means of a mouth mask connected up to the set. Oxygen is passed from the connected oxygen cylinder, passes through a pressure-reducing regulator and is delivered to the face mask for application to the casualty to effect artificial respiration. Extension enables resuscitation in confined places.

PORTABLE OXY-PROPANE CUTTING SET

11. A portable flame cutting set can be mounted on the back of the user. It is provided with self-contained propane and oxygen gases to form a high temperature flame for cutting metals of general thickness up to 2 in.

IMPACT CUTTER

12. A compressed-air operated cutter gives impact force for cutting general hard materials of concrete, stone and metal. Compressed-air is supplied from an air-liner set with compressed-air cylinder via extensible high pressure tube.

K-12 CUTTING SETS

13. A petrol-motor driven portable cutting set with variable cutting discs made of special material for all kinds of cutting duties, including concrete, metal and stone.

COMPRESSED-AIR BREATHING APPARATUS

14. This is a self-contained breathing apparatus with compressed-air stored in a cylinder.