Appendix D

Sewerage Impact Assessment

Prepared for

Ten Choice Development Limited

Prepared by

Ramboll Hong Kong Limited

SECTION 16 PLANNING APPLICATION FOR PROPOSED SOCIAL WELFARE FACILITY (RESIDENTIAL CARE HOME FOR THE ELDERLY) IN "RESIDENTIAL (GROUP C)" ZONE AT PALM SPRINGS PLAZA (SHOP NOS. G1-G3 & G5-G8), YUEN LONG, NEW TERRITORIES

SEWERAGE IMPACT ASSESSMENT

Date	**30 June 2026**
Prepared by	**Sally Chiu** **Assistant Environmental Consultant**
Signed	
Approved by	**Tony Cheng** **Senior Manager**
Signed	
Project Reference	
Document No.	**R10181_v1.0_260630.docx**

No part of this document may be reproduced or transmitted, in any form or by any means electronic, mechanical, photographic, recording or otherwise, or stored in a retrieval system of any nature without the written permission of Ramboll Hong Kong Ltd, application for which shall be made to Ramboll Hong Kong Ltd, [redacted]

Disclaimer: This report is made on behalf of Ramboll Hong Kong Ltd. No individual is personally liable in connection with the preparation of this report. By receiving this report and acting on it, the client or any third party relying on it accepts that no individual is personally liable in contract, tort or breach of statutory duty (including negligence).

Ramboll Hong Kong Limited

[redacted]

Q:\Projects\SHKPS-EHEI00\04 Deliverables\02 SIA\R10181_v1.0_260630.docx

CHAPTERS

Page

1. INTRODUCTION 2

1.1 Background and Objectives 2

1.2 Project Location and Description 2

2. SEWERAGE IMPACT ASSESSMENT 2

2.1 Scope of Work 2

2.2 Assessment Criteria and Methodology 2

2.3 Comparison of the Sewage Generation with the Proposed RCHE 2

3. OVERALL CONCLUSION 5

3.1 Overall Summary 5

FIGURES

Figure 1.1 Location of Application Premises and its Environs

Figure 1.2 Layout of the Proposed RCHE

APPENDICES

Appendix 1.1 Approved General Building Plan

Appendix 2.1 Information for Site Visit

1. INTRODUCTION

1.1 Background and Objectives

1.1.1 This planning statement is submitted to the Town Planning Board (the Board) under Section 16 of the Town Planning Ordinance to seek permission for proposed Social Welfare Facility (Residential Care Home for the Elderly) use (hereafter referred to as "the Proposed RCHE") at Palm Springs Plaza (Shop Nos. G1-G3 & G5-G8), Yuen Long, New Territories (hereafter referred to as "the Application Premises"). Ramboll Hong Kong Limited (the Consultant) has been commissioned by the Applicant to conduct this Sewerage Impact Assessment (SIA).

1.2 Project Location and Description

1.2.1 The Palm Springs Plaza is located at the middle of the Palm Springs.

1.2.2 **Figure 1.1** shows the location and the environs of the Palm Springs Plaza.

1.2.3 According to the approved general building plan of the plaza, there are 2 floors with F&B designated at the eastern end of the G/F and 1/F. The total gross floor area is approximate 6186 m^2 in which around 960 m^2 are designated for food and beverage use.

1.2.4 The plaza is connected to sewers and finally to the on-site sewage treatment plant within the Palm Springs.

1.2.5 The approved general building plan (GBP) of the plaza can be found in **Appendix 1.1**.

1.2.6 The applicant proposes to convert an area of around 974m^2 on the G/F of Palm Springs Plaza (Shop Nos. G1-G3 & G5-G8) to the Proposed RCHE, which will provide 90 private bed spaces. The layout of the Proposed RCHE is shown in **Figure 1.2**.

2. SEWERAGE IMPACT ASSESSMENT

2.1 Scope of Work

2.1.1 The aim of this study is to assess whether the proposed RCHE use would have any adverse impact upon the existing sewerage network. Mitigation measures may be required if any adverse impact is identified with the proposed use.

2.2 Assessment Criteria and Methodology

2.2.1 The Commercial and Industrial Floor Space Utilization Survey (CIFSUS) conducted by the Planning Department has been used to determine the worker density for various economic activities and planned usage types.

2.2.2 Environmental Protection Department's (EPD's) Guidelines for Estimating Sewage Flows for Sewage Infrastructure Planning, Version 1 (GESF) has been referred to for the purposes of estimating the quantity of the sewage generated from the Proposed Development and the existing catchment area. Sewage flow parameters and global peaking factors in this document have been adopted for this SIA.

2.3 Comparison of the Sewage Generation with the Proposed RCHE

Approved GBP Scenario: Sewage Generation of Plaza

2.3.1 Below table shows the sewage generation from the Plaza based on Approved General Building Plan (GBP).

Table 2.1 Estimated Sewage Generation of Plaza (Approved GBP)

Calculation for Sewage Generation Rate of Plaza			
1. Total Sewage			
1. Retail			
Area	=	5226.0	m^2
Assumed floor area per employee	=	28.6	m^2 per employee – (refer to Table 8 of CIFSUS – Retails)
Total number of employee	=	183	employees
Design flow	=	0.28	m^3/employee/day – (refer to Table T-2 of GESF – J4 Community, Social, Personal Services)
Sewage generation rate	=	**51.2**	m^3/day
b. F&B			
Assumer Area	=	960.5	m^2
Assumed floor area per employee	=	19.6	m^2 per employee – (refer to Table 8 of CIFSUS – Restaurant)
Total number of employees	=	49	employees
Design flow for commercial employees	=	1.58	m^3/employee/day – (refer to Table T-2 of GESF – J11 Community, Social, Personal Services)
Sewage generation rate	=	**77.4**	m^3/day
Total Sewage generation rate	=	**128.6**	m^3/day

Proposed Scenario: Sewage Generation of Existing Plaza and Proposed RCHE

2.3.2 A site visit was carried out in June 2026, and the use within the plaza has been checked. The survey information is listed in **Appendix 2.1**. Within the plaza, there is only a small shop serving for F&B use with the area of around 26m^2 (5m x 5.2m). The rest of the areas are used for shops/retails.

2.3.3 The table below shows the sewage generation from the Plaza based on the existing use and with the Proposed RCHE.

Table 2.2 Estimated Sewage Generation of Plaza with RCHE

Calculation for Sewage Generation Rate of Plaza with RCHE			
1. Retail			
Area	=	5186.7	m^2
Assumed floor area per employee	=	28.6	m^2 per employee – (refer to Table 8 of CIFSUS – Retails)
Total number of employee	=	182	Employees
Design flow	=	0.28	m^3/employee/day – (refer to Table T-2 of GESF – J4 Community, Social, Personal Services)
Sewage generation rate	=	**50.8**	m^3/day
2. F&B			
Assumer Area	=	26	m^2
Assumed floor area per employee	=	19.6	m^2 per employee – (refer to Table 8 of CIFSUS – Restaurant)
Total number of employees	=	1	employees
Design flow for commercial employees	=	1.58	m^3/employee/day – (refer to Table T-2 of GESF – J11 Community, Social, Personal Services)
Sewage generation rate	=	**2.1**	m^3/day
3. RCHE with 90 Beds			
3a Employee			
Assumer Area	=	973.8	m^2
Assumed floor area per employee	=	30.3	m^2 per employee – (refer to Table 8 of CIFSUS – Community, Social & Personal Services)
Total number of employees	=	32	employees
Design flow for commercial employees	=	0.28	m^3/employee/day – (refer to Table T-2 of GESF – J11 Community, Social, Personal Services)
Sewage generation rate	=	**9.0**	m^3/day
3b Residents			
Total no. of Beds	=	90	no(s)
Total number of residents	=	90	People
Design flow	=	0.19	m^3/employee/day – (refer to Table T-1 of GESF – Institutional and Special Class)
Sewage generation rate	=	**17.1**	m^3/day
RCHE (Total)	=	**26.1**	m^3/day
Total Sewage generation rate	=	**79.0**	m^3/day

2.3.4 According to the Table 2.1 and 2.2 above, the sewage generation from the Approved GBP Scenario is around 128.6 m^3/day while that from the Proposed Scenario is around 79.0 m^3/day. There would not be an increase in the sewage generation with the Proposed Scenario in comparison with the Approved GBP Scenario. Therefore, there is no adverse sewerage impact with the implementation of the Proposed RCHE.

3. OVERALL CONCLUSION

3.1 Overall Summary

3.1.1 The Applicant proposed to convert an area of around 974m^2 on the G/F of Palm Springs Plaza (Shop Nos. G1-G3 & G5-G8) to the Proposed RCHE, which will provide 90 private bed spaces.

3.1.2 A comparison of the sewage generation between the Approved GBP Scenario and the Proposed Scenario has been conducted. Based on the calculation, there would not be an increase of sewage generation after the implementation of the Proposed RCHE.

3.1.3 Therefore, there is no adverse sewerage impact with the implementation of the Proposed RCHE.

Figures

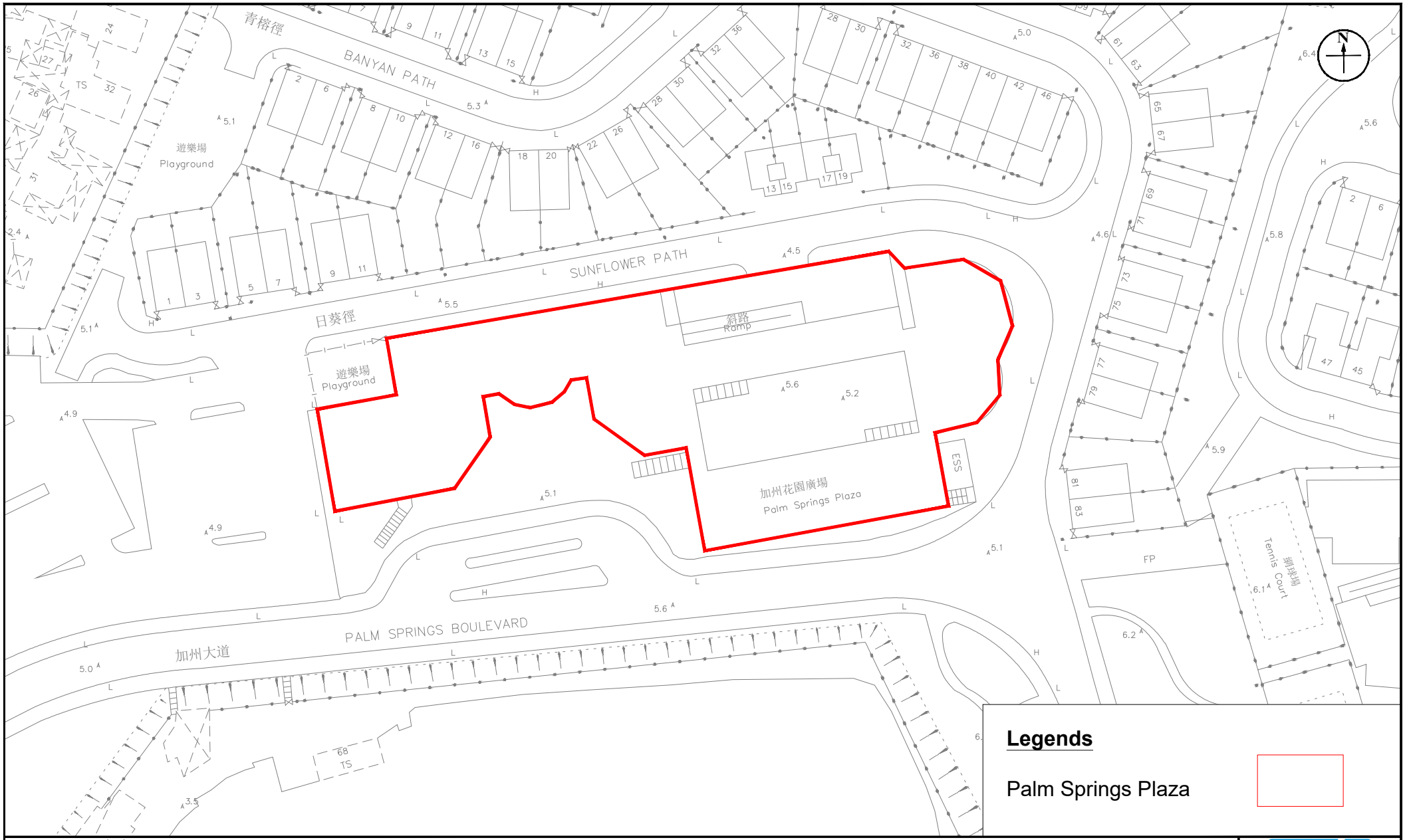
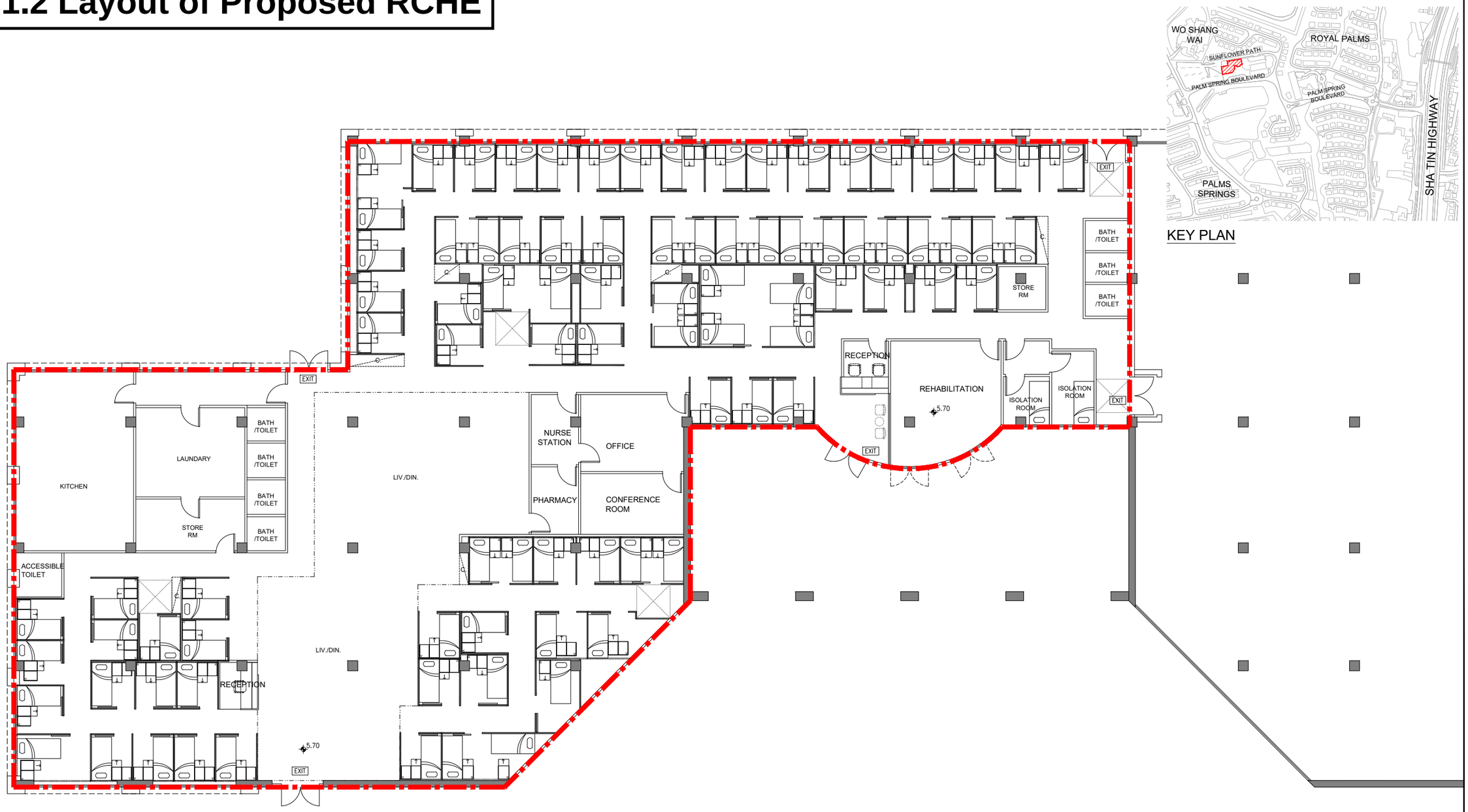


Figure: 1.1	RAMBOLL
Title: Location of Palm Springs Plaza and its Environs	Drawn by: SC
	Checked by: TC
Project: Section 16 Planning Application for Proposed Social Welfare Facility (Residential Care Home for the Elderly) in "Residential (Group C)" Zone at Palm Springs Plaza (Shop Nos. G1-G3 & G5-G8), Yuen Long, New Territories	Rev.: 1.0
	Date: Jun 2026

Q:\Projects\SHKPS-EHEI00\05 Assessments\04 SIA\Site Location.dwg

Figure 1.2 Layout of Proposed RCHE



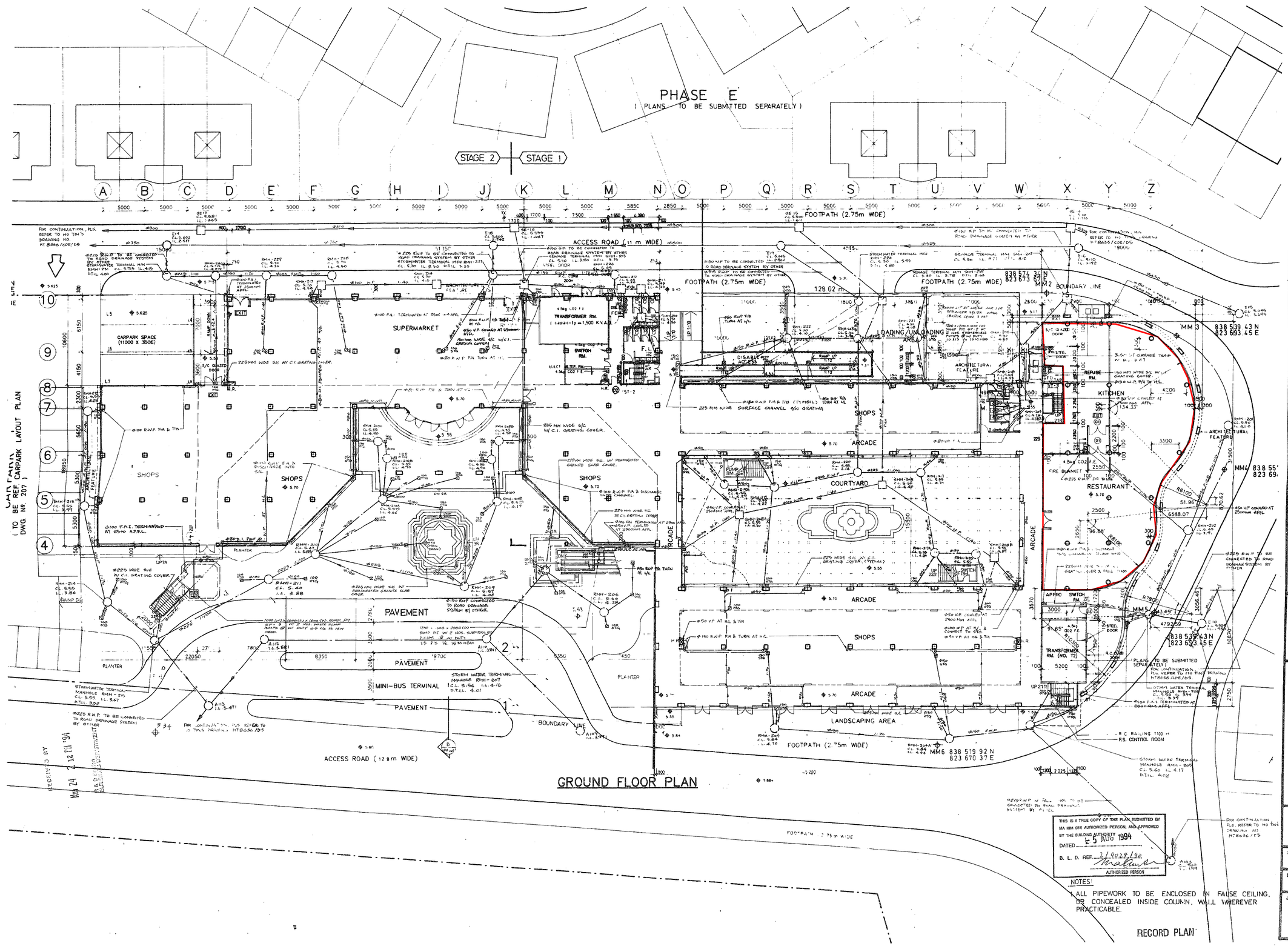
alliance architects limited
22/F WO FOO COMMERCIAL BUILDING, NO.574-576
NATHAN ROAD, YAU MA TEI, KOWLOON, HK
Tel 2104 2323 Fax 2104 2277 info@alliancehk.com

Project Title:
Section 16 Planning Application for Proposed Social Welfare Facility (Residential Care Home for the Elderly) in "Residential (Group C)" Zone at Palm Springs Plaza(Shop Nos. G1–G3 & G5–G8), Yuen Long, N.T.

REV	DATE	DESCRIPTION	REV	DATE	DESCRIPTION
A	20260609				

Drawn:	Date:	Job No.
XX	JUNE 2026	AA–26–442
Check: DC	Scale: 1:180	Drawing No.

Appendix 1.1 Approved General Building Plan



THIS IS A TRUE COPY OF THE PLAN SUBMITTED BY MA KIM SEE AUTHORIZED PERSON, AND APPROVED BY THE BUILDING AUTHORITY
DATED 5 AUG 1994
B. L. D. REF. 2/9024/90
AUTHORIZED PERSON

NOTES:
1. ALL PIPEWORK TO BE ENCLOSED IN FALSE CEILING, OR CONCEALED INSIDE COLUMN, WALL WHEREVER PRACTICABLE.

B.L.D. REFERENCE
2/9024/90

F.S.D. REFERENCE
8/21357

W.W.O. REFERENCE

NO.	REVISIONS / NOTES	DATE	BY
A	GENERAL REVISION AS PER LATEST ARCH. PLAN	1/96	ST.
B	GENERAL REVISION TO SUIT SITE SITUATION	6/96	TC.
C	DRAINAGE LAYOUT REVISED AT ENTRANCE PLAZA	3/96	TC
D	DRAINAGE LAYOUT AT ENTRANCE PLAZA HAS BEEN REVISED	4/96	ST
E	STAGE 2 DRAINAGE LAYOUT HAS BEEN GENERALLY REVISED	7/96	TC

ARCHITECT
MA LEUNG & ASSOCIATES
ARCHITECTS & ENGINEERS (HONG KONG) LTD.
馬梁程面顧問工程師(香港)有限公司

PLANNING & LANDSCAPE CONSULTANT
URBIS
Urban Travers Morgan Limited

CIVIL & STRUCTURAL CONSULTANT
何田建築工程師有限公司
HO TIN & ASSOCIATES
ARCHITECTS ENGINEERS LIMITED

E & M CONSULTANT
CONSOLIDATED CONSULTING ENGINEERS LTD.
集益顧問工程師有限公司

PROJECT
WO SHANG WAI DEVELOPMENT PHASE I

21 NOV 1994

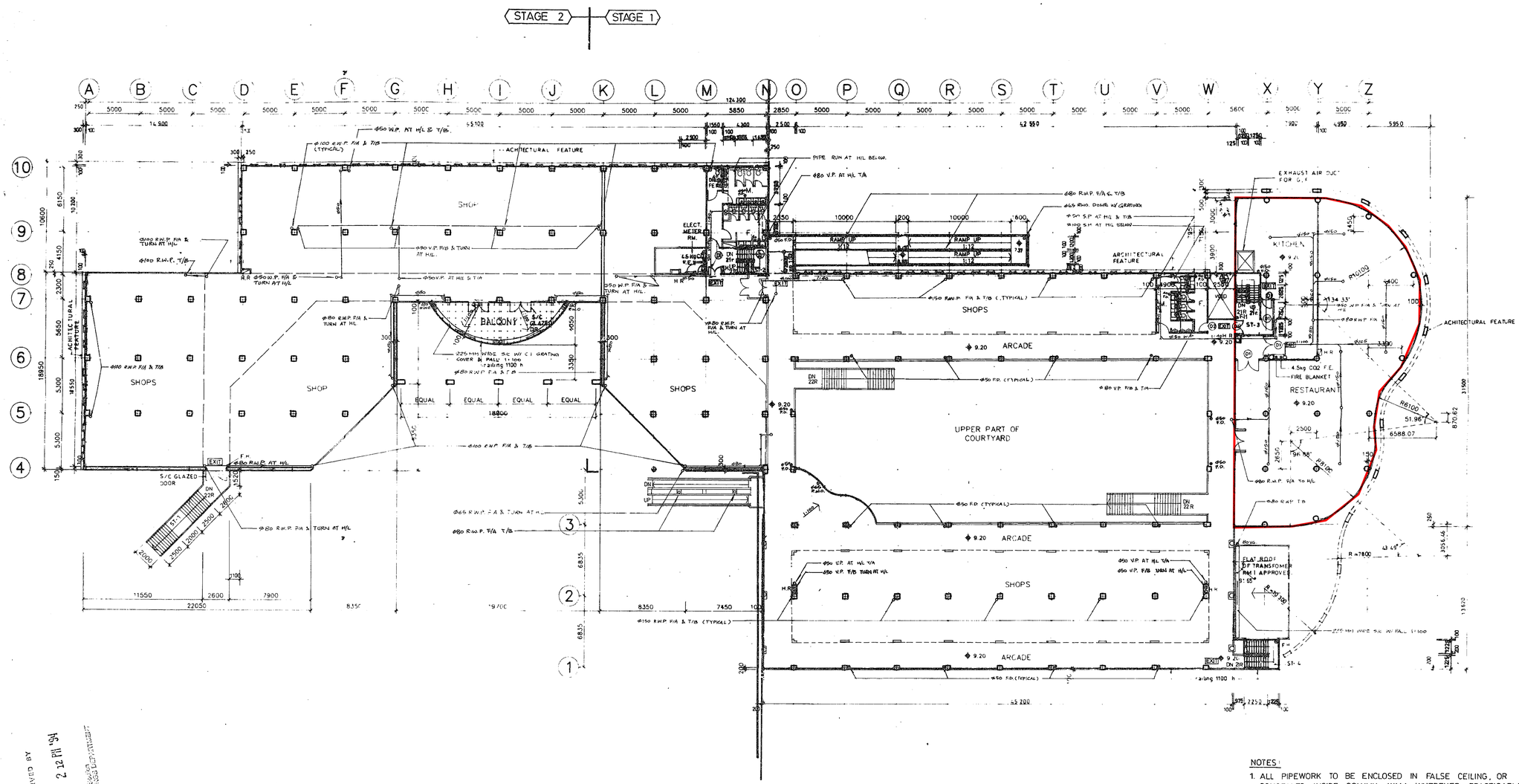
ALL MEASUREMENT MUST BE CHECKED AT THE WORK BY THE CONTRACTOR

DO NOT SCALE DRAWINGS

ALL PRINTS SPECIFICATIONS AND THEIR COPYRIGHT ARE THE PROPERTY OF THE ARCHITECTS AND SHALL BE RETURNED AT THE COMPLETION OF THE WORK

DRAINAGE LAYOUT FOR GROUND FLOOR (COMMERCIAL CENTRE)

SCALE	DATE
1 : 200	SEPT, 92
DRAWN BY	CHECKED BY
JOB NO. CCE 484/CC/	DRAWING NO. D-6
REV. E.	



FIRST FLOOR PLAN

1 : 200

SUPERIMPOSED LOAD = 4kPa
AUTOMATIC SPRINKLER SYSTEM TO BE PROVIDED

NOTES :

1. ALL PIPEWORK TO BE ENCLOSED IN FALSE CEILING, OR CONCEALED INSIDE COLUMN, WALL WHEREVER PRACTICABLE.

RECEIVED AT
Nov 24 2 12 PM '94
B.S. & S.D. DIVISION
BUILDING DEPARTMENT

THIS IS A TRUE COPY OF THE PLAN SUBMITTED BY MA KIM BEE AUTHORIZED PERSON, AND APPROVED BY THE BUILDING AUTHORITY
DATED 5 AUG 1994
B. L. D. REF. 2/9024/90
AUTHORIZED PERSON

RECORD PLAN

B.L.D. REFERENCE	2/9024/90
F.S.D. REFERENCE	8/21357
W.W.O. REFERENCE	

NO.	REVISIONS / NOTES	DATE	BY
A	GENERAL REVISION AS PER LATEST ARCH. PLAN	1/94	S.Y.
B	GENERAL REVISION TO SUIT SITE SITUATION	6/93	T.C.
C	STAGE 2 DRAINAGE LAYOUT HAS BEEN GENERALLY REVISED	5/94	S.Y.
D	STAGE 2 DRAINAGE LAYOUT HAS BEEN GENERALLY REVISED	7/94	T.C.

ARCHITECT

MA LEUNG & ASSOCIATES
ARCHITECTS & ENGINEERS (HONG KONG) LTD.
馬梁建築師工程師(香港)有限公司

PLANNING & LANDSCAPE CONSULTANT

URBIS Urban Planners Managers Limited
城市規劃管理顧問有限公司

CIVIL & STRUCTURAL CONSULTANT

何田建築工程師有限公司
HO TIN & ASSOCIATES
ARCHITECTS ENGINEERS LIMITED

E & M CONSULTANT

CONSOLIDATED CONSULTING ENGINEERS LTD.
集益顧問工程師有限公司

PROJECT

WO SHANG WAI DEVELOPMENT PHASE I

21 NOV 1994

ALL MEASUREMENT MUST BE CHECKED AT THE WORK BY THE CONTRACTOR

DO NOT SCALE DRAWINGS

ALL PRINTS SPECIFICATIONS AND THEIR COPYRIGHT ARE THE PROPERTY OF THE ARCHITECTS AND SHALL BE RETURNED AT THE COMPLETION OF THE WORK

DRAINAGE LAYOUT FOR FIRST FLOOR (COMMERCIAL CENTRE)

SCALE	DATE
1 : 200	SEPT, 92
DRAWN BY	CHECKED BY

JOB NO.	DRAWING NO.	REV.
CCE484/CC/	D	D

Appendix 2.1 Information for Site Visit

G12 桑名食堂
Kuwana Canteen