

**PROPOSED INSTALLATION
OF
MOBILE COMMUNICATIONS RADIO BASE STATION
AT
TAI TONG HILL TOP 297
YUEN LONG
NT**

PROJECT PROFILE

HUTCHISON TELEPHONE CO LIMITED

Prepared by: Prudential Surveyors Int'l Ltd

OCTOBER 2008

Basic Information

Project Title

1. Proposed Installation of Mobile Communications Radio Base Station at Tai Tong Hill Top 297, Yuen Long.

Purpose and Nature of the Project

2. This project is a development of Hutchison Telephone Co Limited to improve the mobile phone coverage for visitors of the Conservation Area and to ensure that tele-communications for the general public is maintained in case of emergency.

Name of Project Proponent

3. Hutchison Telephone Co Limited.

Location and Scale of the Project

4. The Mobile Communications Radio Base Station is proposed at Tai Tong Hill Top 297 as shown on the location plan and part plan at **Appendix I**. The station will comprise of an equipment platform [7.0m (l) x 3.5m (w) x 0.45m (D)] and two antenna pole platforms, pole 1 [2.6m (l) x 2.6m (w) x 0.5m (D)] and pole 2 [2.4m (l) x 2.4m (w) x 0.5m (D)], with a total site area of 37.02 square metres. The antenna pole platform for mounting pole 2 of 6.5 metres in height and the equipment platform with six (6) outdoor equipments will be erected on the hill top at level +294.1 mPD, whereas the antenna pole platform for mounting pole 1 of 7.5m in height will be erected at level +284.0 mPD. The antenna and equipment platforms will be constructed of ready mixed cast in-situ concrete, which will be transported to the proposed area by helicopter. All the construction materials, equipment and wastes, etc., will be transported to and away from the site by helicopter. No haul road will be constructed. Public utilities such as electricity supply and telecommunication lines will be installed for the mobile communications radio base station.
- 5 Hutchison Telephone Co Limited had submitted a proposal to District land Office (DLO) in June 2007. DLO has referred the proposal to other related

government departments, including Geotechnical Engineering Office of Civil Engineering and Development Department, Planning Department and Environmental Protection Department (EPD) etc. for comment. Geotechnical Engineering Office of Civil Engineering and Development Department commented that the effects of the proposed works on the affected slopes should be investigated. Planning Department commented that the subject site falls within an area zoned "Conservation Area" ("CA") on the approved Tong Yan San Tsuen Outline Zoning Plan (OZP) No. S/YL-TYST/10. According to the Notes of the OZP, the proposed radio base station for provision of mobile phone services, being a "Public Utility Installation" use, requires planning permission from the Town Planning Board. EPD commented that an environmental permit is required for the construction and operation of the Designed Project, as the proposed works locates in an area zoned "Conservation Area" on the Tong Yan San Tsuen OZP. The above said comments are being resolved and Lands Department will issue the Short Term Tenancy (STT) when all comments are resolved.

6. The radio coverage and the impact on the environment are the salient factors in the site selection process. The proposed site is considered to provide significant radio coverage to the surroundings. Other alternatives have also been considered but were found unsuitable.

Number and Types of Designated Projects to be Covered

- 7 The project involves a mobile communications radio base station to be installed at the proposed location as shown in **Appendix I**. According to EIAO Schedule 2, PART I, Section Q.1, the proposed project is a designated project as it involves building works in a Conservation Area and it is not under exceptional cases in Section Q1 (a) to (j).

Name and Telephone Number of Contact Person

8. The contact person for this project is Mr. Henry Chan of Hutchison Telephone Co Limited, telephone number 2128 5838 and facsimile number 3152 2751.

Outline of Planning and Implementation Programme

Planning and Implementation

- 9 The project is planned and managed by Hutchison Telephone Co Limited and they will install their own mobile phone network at the proposed station.
- 10 Upon the grant of a Short Term Tenancy and Environmental Permit by the District Lands Office (DLO) and Environmental Protection Department (EPD) respectively and consent to commence building works by the Buildings Department (BD), Hutchison Telephone Co Limited will start and complete the construction work in accordance with the work schedule. The structural drawings are under preparation and will be submitted to BD for approval under the Buildings Ordinance in late October 2008 with approval anticipated two months thereafter.

Work Schedule

11. The construction work including the equipment and antennas installation is proposed to commence in late January 2008 and to be completed by the mid of March 2009. It is proposed that the mobile phone station will be put into operation in the end of March 2009. The proposed work schedule is given at **Appendix II**.

It is anticipated the excavated material will be transported off the site immediately by helicopter. Also, the exposed excavated surface will be immediately screeded with cement/sand or binding layer to make the surface impervious. Furthermore, the excavated area will be covered completely prior to concreting to minimize the possibility of surface run-off from the site.

Possible Impact on the Environment

Construction Impacts

12. The landscape and visual impact during construction and after completion of work is considered and addressed in paragraph 21.
13. Noise emission during the construction and on completion of the projects is

- considered to be minimal and addressed in paragraph 22.
14. Disposal of waste including some surplus construction material and some general refuse is considered minimal and addressed in paragraph 23.
 15. Dust impact from construction activities is considered to be minimal and is addressed in paragraph 24.
 16. Earthworks operation is not required as the excavation depth is less than 600 mm and there will be no blasting operation.
 17. Night-time work is not required for the construction of the project.
 18. No ecological impact is anticipated during the construction and on completion of the project.

Operational Impacts

19. Completion of the Mobile Communications Radio Base Station will not cause any significant change to the environment. The site layout plan, section and typical details of the proposed Mobile Communications Radio Base Station and photographs are shown in **Appendix III** to illustrate the appearance of the mobile communications radio base station.

Major Elements of the Surrounding Environment

20. The major elements of the surrounding environment are as follows:-

Conservation Area setting

The proposed site comprises of two antenna platforms and an equipment platform. Antenna platform for pole 2 and the equipment platform are situated on level ground on the hill top at level +294.1 mPD, whilst the antenna platform for pole 1 is situated on level ground at level +284.0 mPD. The proposed site is surrounded by slopes and the ground is covered with grass. An existing TVB radio Station is located at the southeast of the equipment platform and antenna platform pole 2. No streams are found near the site. Furthermore, no radiation monitoring station, ecological sensitive receiver or heritage sensitive receiver is located in the surrounding environment. Therefore, the installation will not affect the present setting of the Conservation Area.

The site is surrounded by bushes and grass, which is commonly found in Hong

Kong. No tree is required to be felled to provide the necessary area for the installation of the proposed base station.

Environmental Protection Measures to be Incorporated in the Design and any Further Environmental Implications

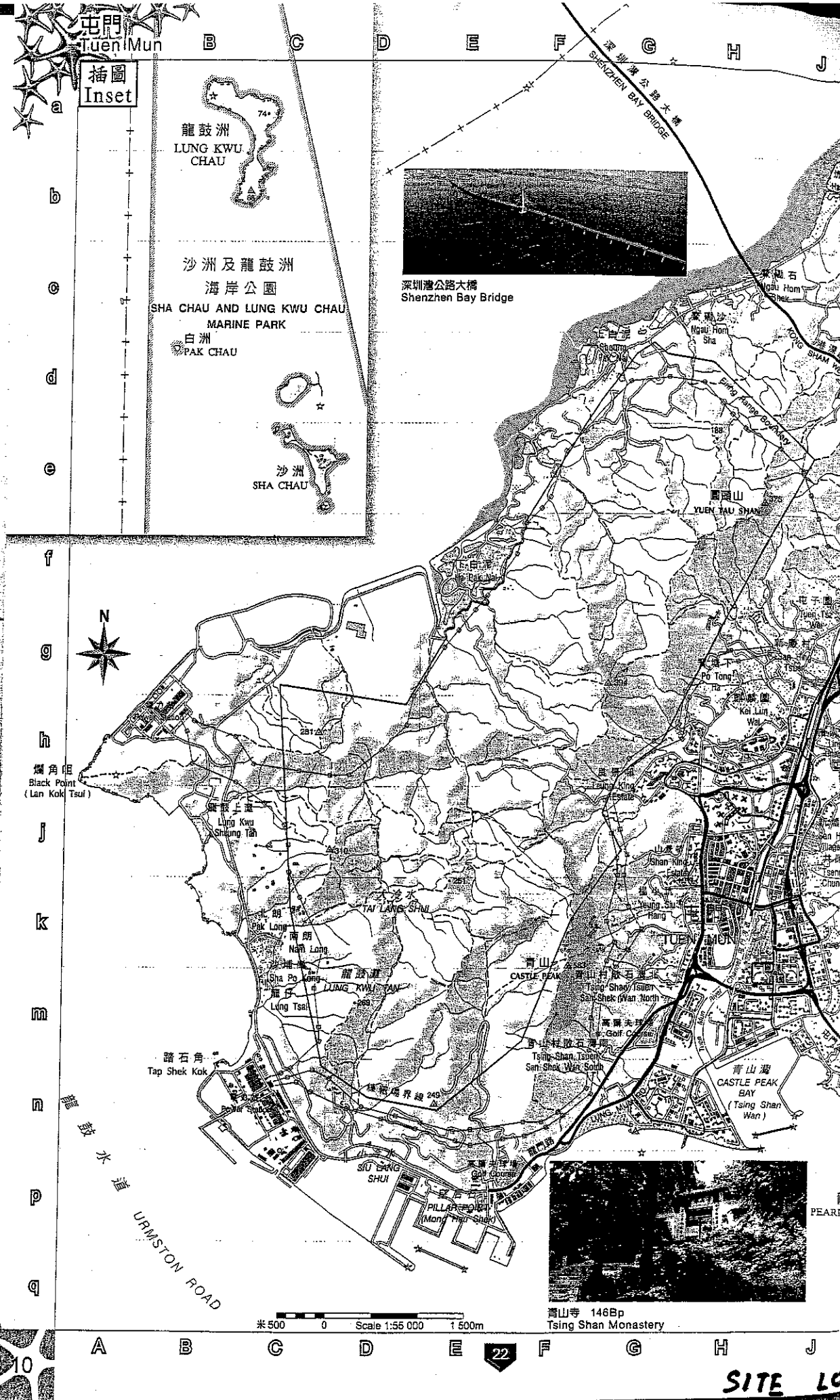
21. In order to further minimise the visual impact of the station, the antenna poles will be painted or coated in "Antique" (B.S. 10B25 or **Pantone 462U**) or similar subdued colour to match the existing surroundings. As for the landscaping, all temporarily disturbed areas will be reinstated to their original states with hydroseeding of grasses and/ or vegetation planting.
22. Only hand held equipment will be used for construction. Heavy equipment will not be used. Also, noise sensitive receiver is more than 600m away from the site. Therefore, noise impact is anticipated to be minimal during the construction. Nevertheless, construction activities will be carried out only in daytime (9:00-19:00). Since there will be hikers enjoying their recreational activities in the Conservation Area during weekends and public holidays, no construction work will be scheduled on Saturday, Sunday and public holidays in order to minimize the impact on the hikers.
23. All the construction materials, equipment and wastes, etc., will be transported to and away from the site by helicopter. Helicopter flights required for transporting materials to/ from the site will not be frequent. Helicopter will be used when transporting materials and equipment to the site, transporting excavated soil and construction waste away from the site and concreting the antenna platforms and equipment platform. Construction waste generated on site will be transported away from site by helicopter as soon as possible. If the construction waste is left overnight, they will be stockpiled and covered with tarpaulin sheets to ensure run-off. The estimated number of trips is 150 over a period of 49 days.
24. The site will be completely watered down to minimize any dust that may be generated during the construction stage.
25. The Standard Pollution Mitigation Measures will be incorporated in relevant works contracts during the construction phase of the works. The operation of the proposed sites is unmanned and will not generate noise nor have any effect on air quality and water quality.

- 26 The operation of the proposed Mobile Communications Radio Base Station will strictly comply with the "Code of Practice for the Protection of Workers and Members of Public Against Non-Ionizing Radiation Hazards from Radio Transmitting Equipment" issued by OFTA. The proposed location of the station is quite remote from any area for inhabitancy. Furthermore, the location of the emitter of the station is at least 6.5 metres from the ground and pointing away from any human activities or inhabitation. In this case, the non-ionizing radiation has no significant impact on the public.
- 27 The Mobile Communications Radio Base Station will be cleaned and painted every year if necessary to maintain the good condition of the site. Except in case of any troubleshooting and emergency repair, the periodic inspection will only be carried out once every three months in the first year and once a year afterwards. The low inspection frequency will therefore not give any significant impact on the environment.

APPENDICES

Appendix I	Site Location Plan and Part Plan
Appendix II	Proposed Work Schedule
Appendix III	Structural Plan and Site Photos

Appendix I
Site Location Plan & Part Plan



屯門
Tuen Mun

插圖
Inset

龍鼓洲
LUNG KWU
CHAU

沙洲及龍鼓洲
海岸公園
SHA CHAU AND LUNG KWU CHAU
MARINE PARK
白洲
PAK CHAU

沙洲
SHA CHAU

深圳灣公路大橋
Shenzhen Bay Bridge

爛角咀
Black Point
(Lan Kok Tsui)

踏石角
Tap Shek Kok

靑山寺 146Bp
Tsing Shan Monastery

10

22

SITE LC

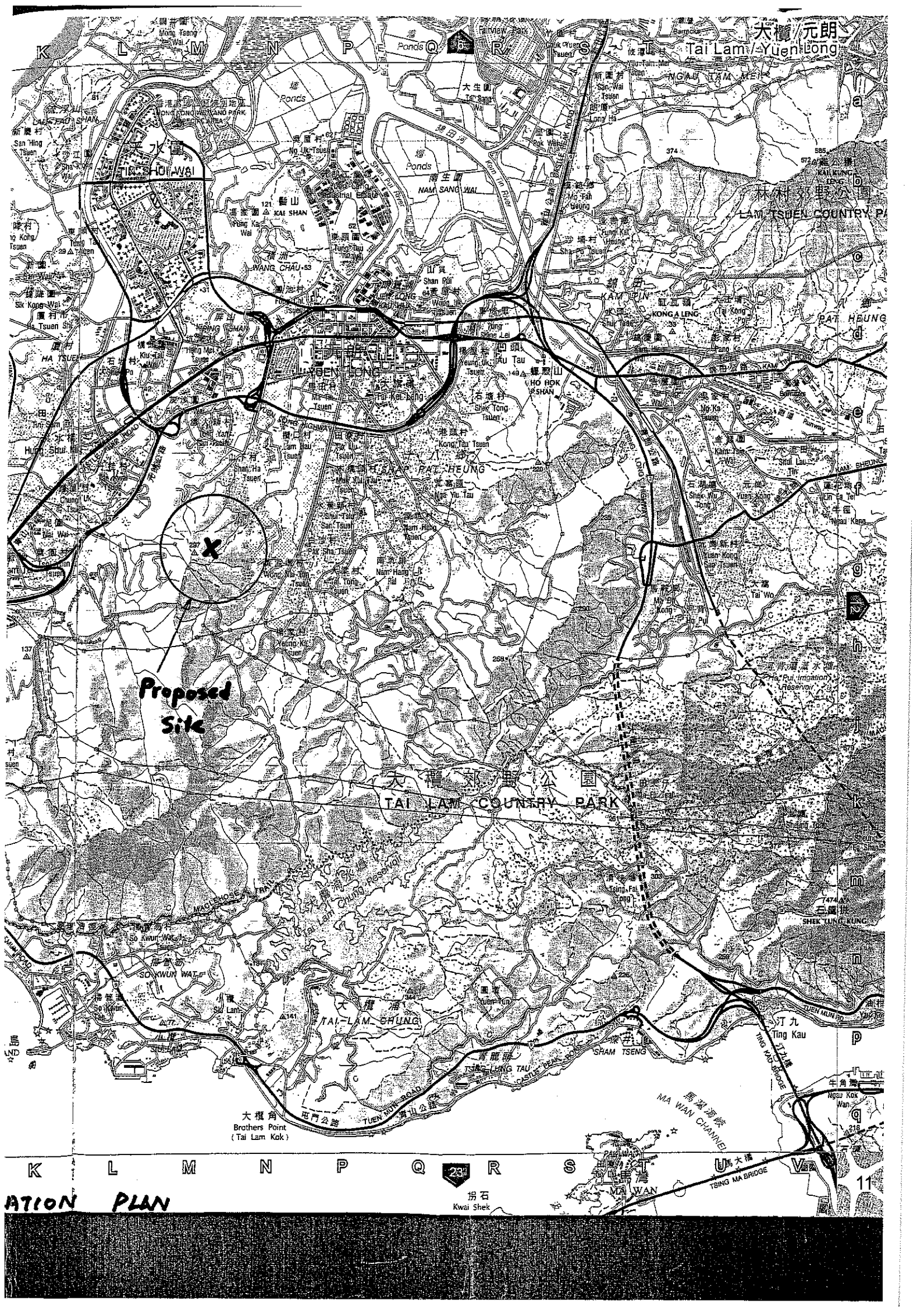
龍鼓水道
URMSTON ROAD

米 500 0 Scale 1:55 000 1 500m

A B C D E F G H J

10 22

SITE LC



Proposed Site

TAI LAM COUNTRY PARK

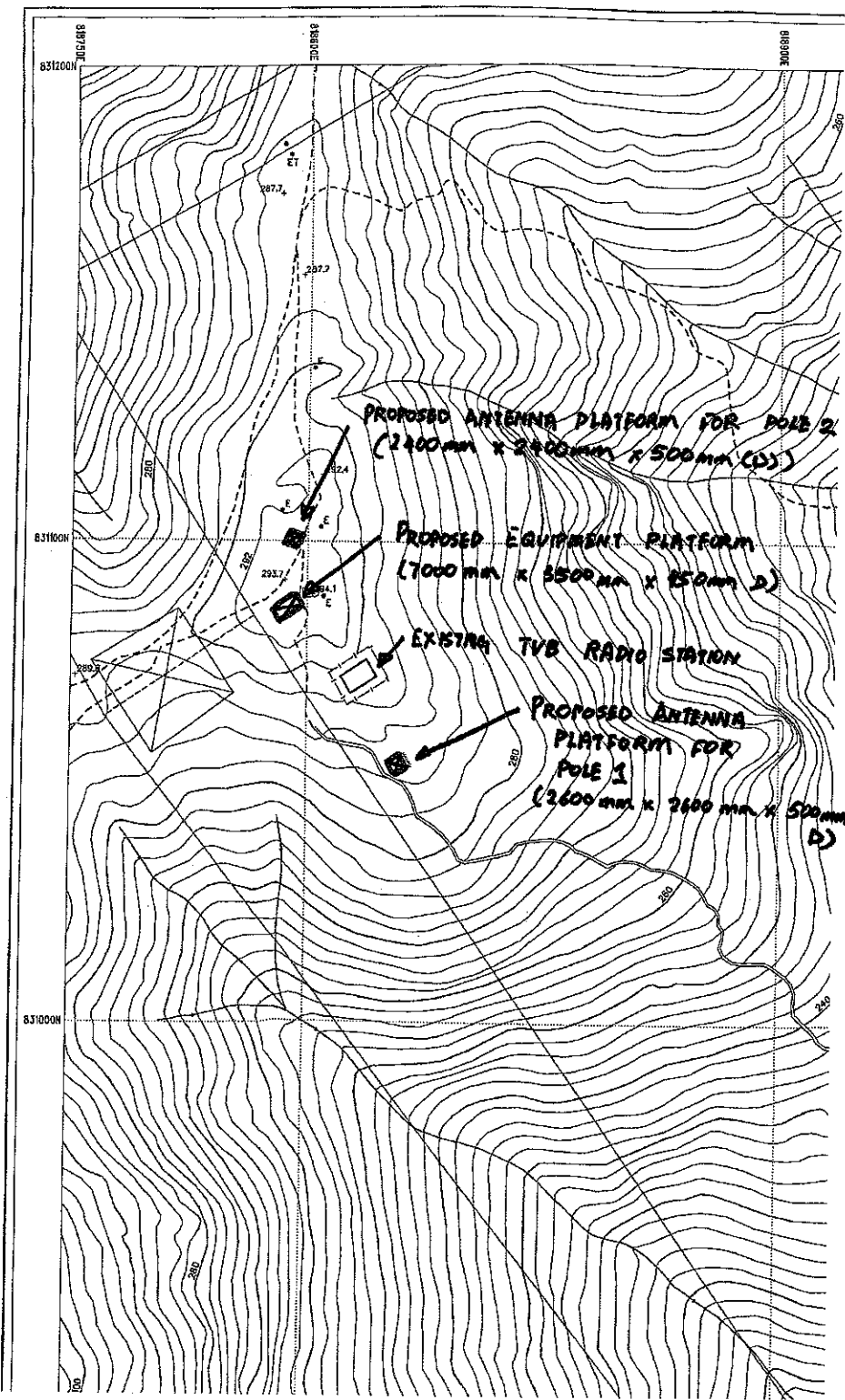
大嶼角
Brothers Point
(Tai Lam Kok)

ATION PLAN

23

拐石
Kwai Shek

11

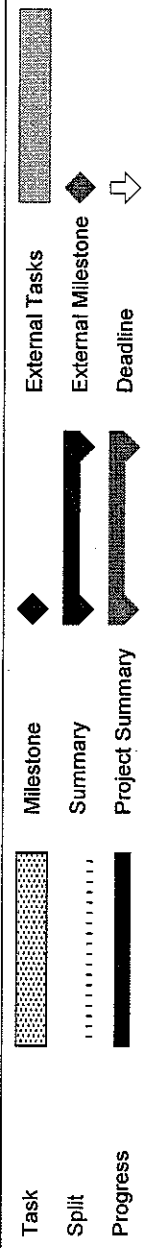


PART PLAN

Appendix II
Proposed Work Schedule

Proposed Installation of Mobile Communications Radio Base Station at Tai Tong, Yuen Long, N.T.

ID	Task Name	Duration	Start	Finish	2009					
					Oct	Nov	Dec	Jan	Feb	Mar
1	Submission for approval by Buildings Department (BD)	60 days	Fri 10/24/08	Mon 12/22/08						
2	Submission of Project Profile (PP) / Apply for permission to apply directly for Environmental Permit (EP)	45 days	Wed 10/22/08	Fri 12/5/08						
3	Permission from EPD for apply for EP directly	5 days	Sat 12/6/08	Wed 12/10/08						
4	Apply for EP	30 days	Thu 12/11/08	Fri 1/9/09						
5	Apply for consent and submission of SSP	30 days	Tue 12/23/08	Wed 1/21/09						
6	Notification of commencement of work	7 days	Thu 1/22/09	Wed 1/28/09						
7	Mobilization	7 days	Thu 1/29/09	Wed 2/4/09						
8	Carry out excavation work	21 days	Thu 2/5/09	Wed 2/25/09						
9	Construction of footing	14 days	Thu 2/26/09	Wed 3/11/09						
10	Equipment and Antenna installation	7 days	Thu 3/12/09	Wed 3/18/09						
11	Testing and Commission	5 days	Thu 3/19/09	Mon 3/23/09						



Project: works schedule_1
Date: Tue 10/21/08

Task

Split

Progress

Milestone

Summary

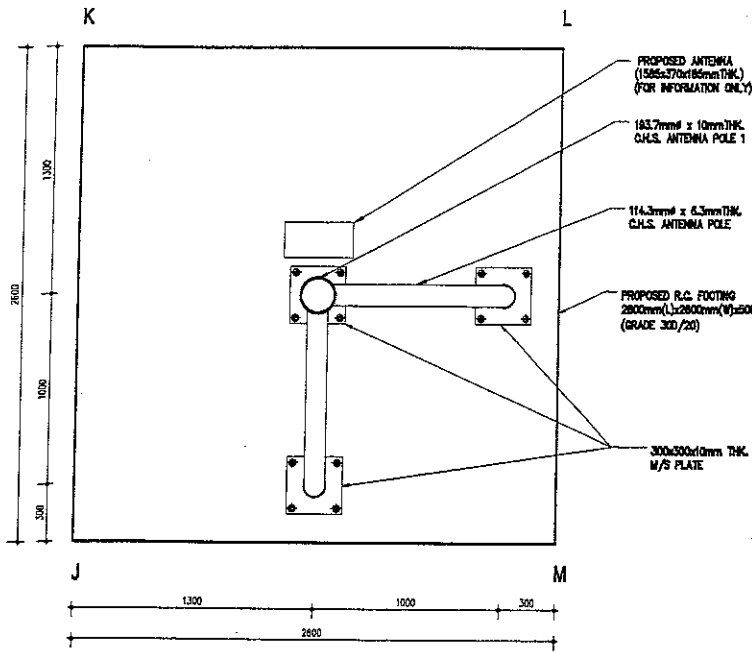
Project Summary

External Tasks

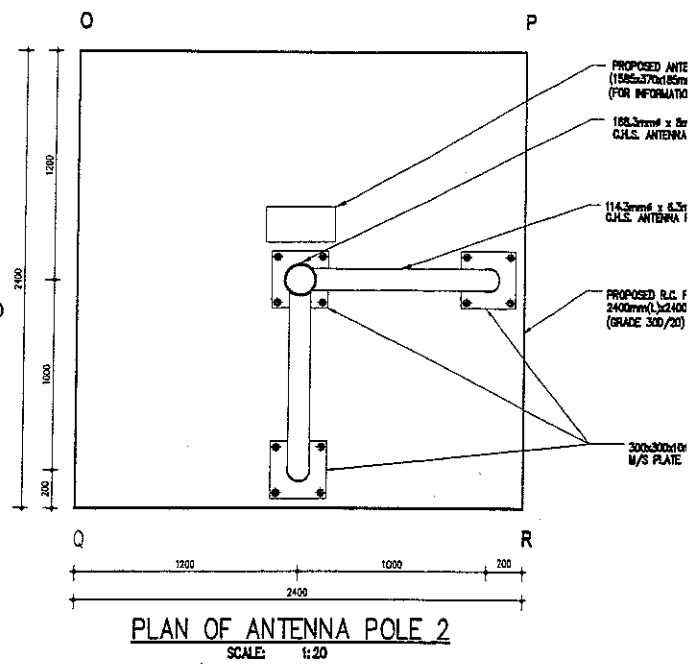
External Milestone

Deadline

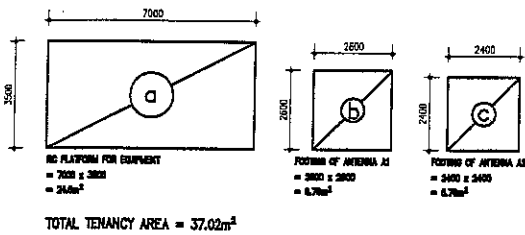
Appendix III
Design Plan and Site Photos



PLAN OF ANTENNA POLE 1
SCALE: 1:20

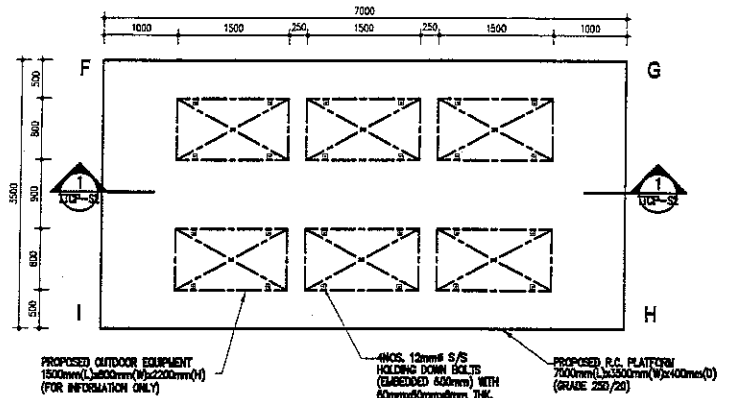


PLAN OF ANTENNA POLE 2
SCALE: 1:20

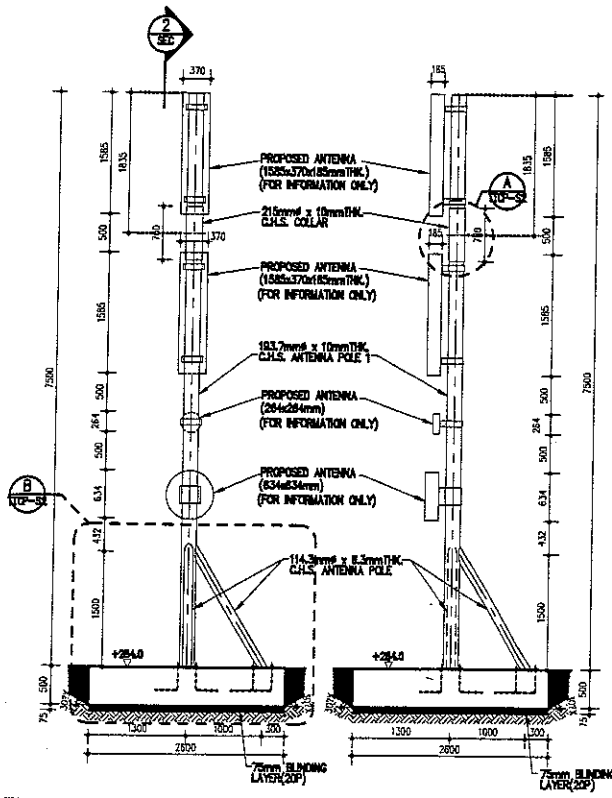


TOTAL TENANCY AREA = 37.02m²

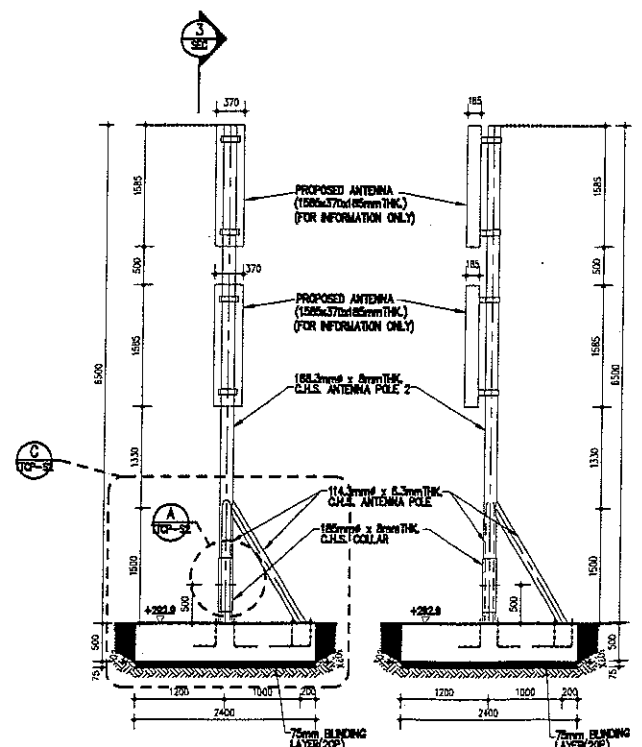
TENANCY AREA
SCALE: 1:20



LAYOUT PLAN OF CONC. PLATFORM FOR OUTDOOR EQUIPMENT
SCALE: 1:50



ELEVATION OF ANTENNA POLE 1 SECTION 2-2
SCALE: 1:50



ELEVATION OF ANTENNA POLE 2 SECTION 3-3
SCALE: 1:50

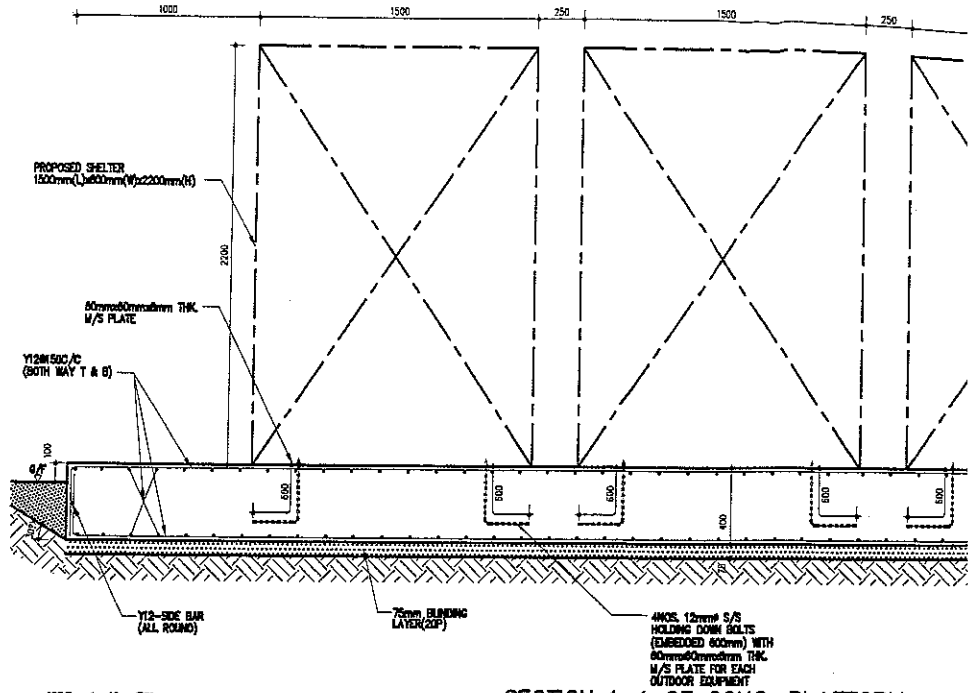
GENERAL NOTES:

STRUCTURAL WORKS

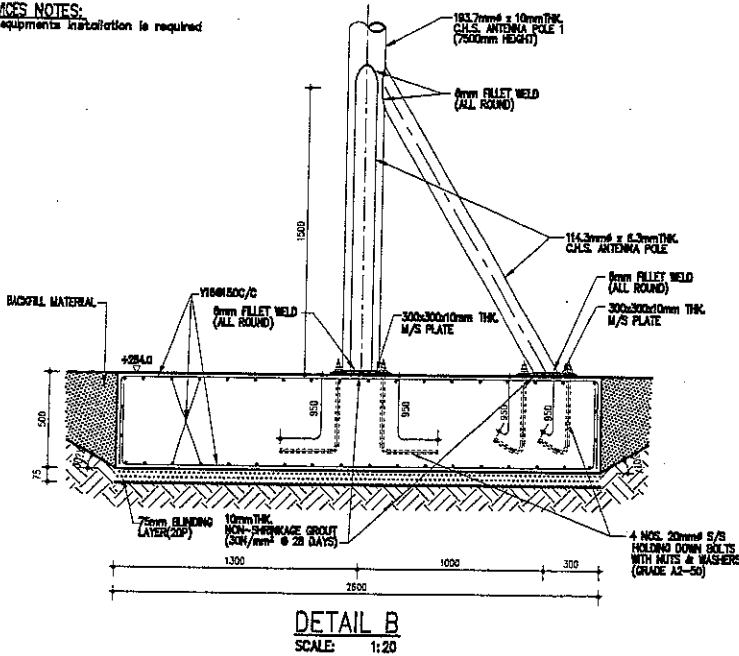
- The design of superstructure is in accordance with "Building (Construction) Regulation 1960", "The Structural Use of Steel 2005, Hong Kong" and "The Structural Use of Concrete 2004".
- The steel analysis to be in accordance with "Code of Practice on Wind Effects, Hong Kong - 2004"
Basic wind pressure = 3.41 kPa (Below 300.00m)
Pressure factor = 2 (for antenna)
= 1.3 (for Pole)
= 1.05 (for outdoor equipment)
- All structural steel to be Grade S275 and complies with BS EN 10025:2004.
- Welding design to be in accordance with BS EN-1011 PART 1 & 2. All surface of site weld to be touch up with 2-coats of anti-corrosive cold galvanized primer.
- All welding shall be carried out by qualified welders having satisfactorily completed the appropriate welding tests specified in B.S. 4871 (1985) prior to the commencement of structural steelwork.
- All stainless steel bolts and nuts shall be grade A2-50 and complies with BS 6105.
- The structural steel shall be hot-dip galvanized conforming to BS EN 1461:1999 and coated with a layer of anti-corrosion paint.
- The fabrication, erection and welding of structural steel shall conform to the Hong Kong Building (Construction) Regulations 1980 and Code of Practice for Structural Use of Steel 1987.
- All weld shall be tested in accordance with B.S.3023 (1986).
- Certificate of origin and chemical composition of the structural steel to be used shall be submitted to the Engineer prior to the commencement of fabrication work.
- Adequate supervision shall be carried out by the Engineer during execution of the proposed works.
- Test reports on bolts and weldings shall be submitted to the EO office for record purposes.
- The Contractor shall appoint a professionally qualified and technical competent person to supervise the execution of works.
- All non-shrinkage grout shall be complied with SAA MP20 part 3.
- Concrete grade to be 30/20 to CSI. Concrete cover to be 50mm.
- All reinforcement to be Grade 250/180 complies with CS2:1985.
- Soil bearing capacity = 50 kPa.

FIRE SERVICES NOTES:

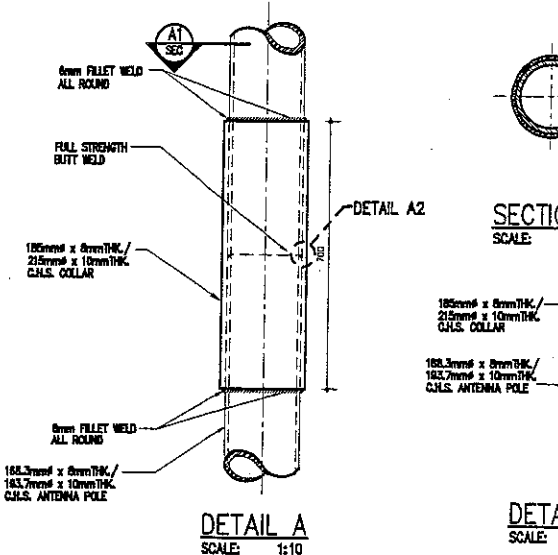
- No F.S. equipments installation is required



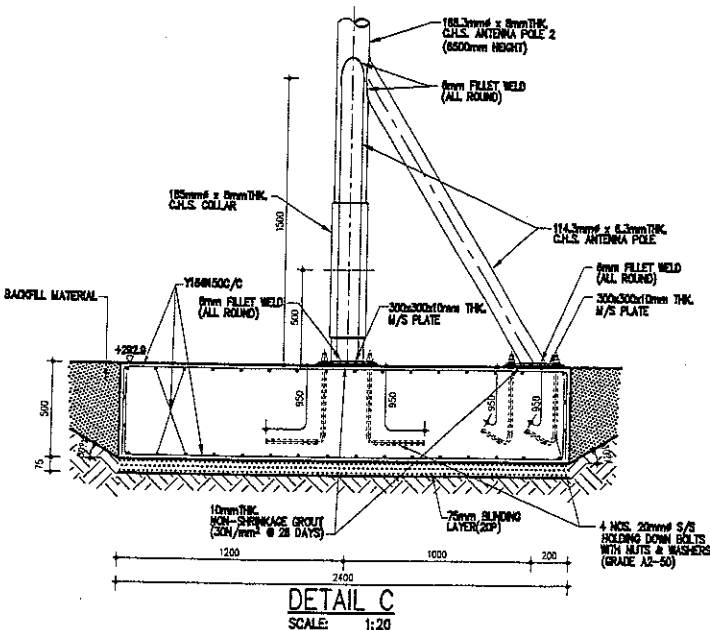
SECTION 1-1 OF CONC. PLATFORM FOR OUTDOOR EQUIPMENT
SCALE: 1:20



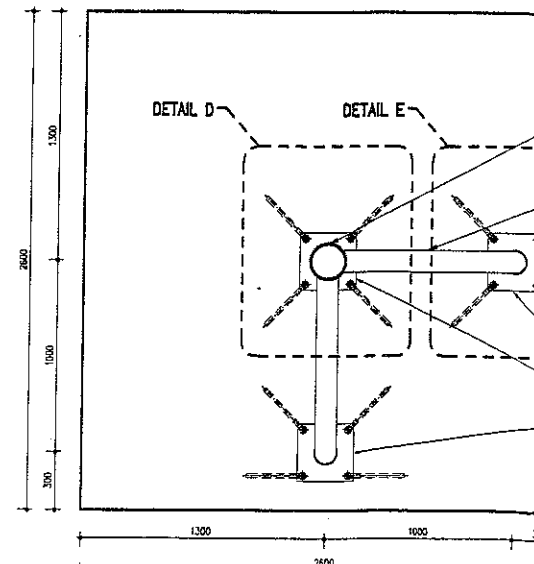
DETAIL B
SCALE: 1:20



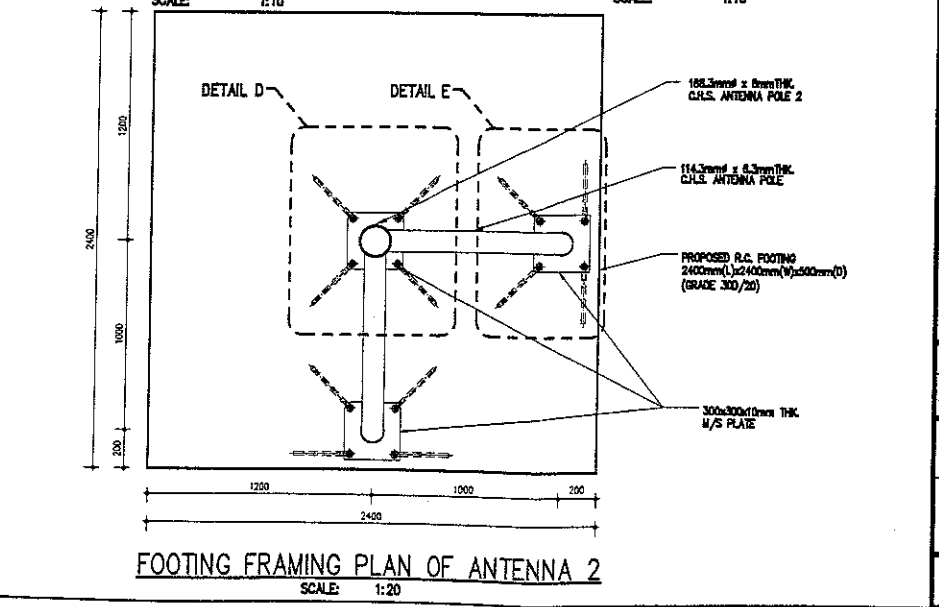
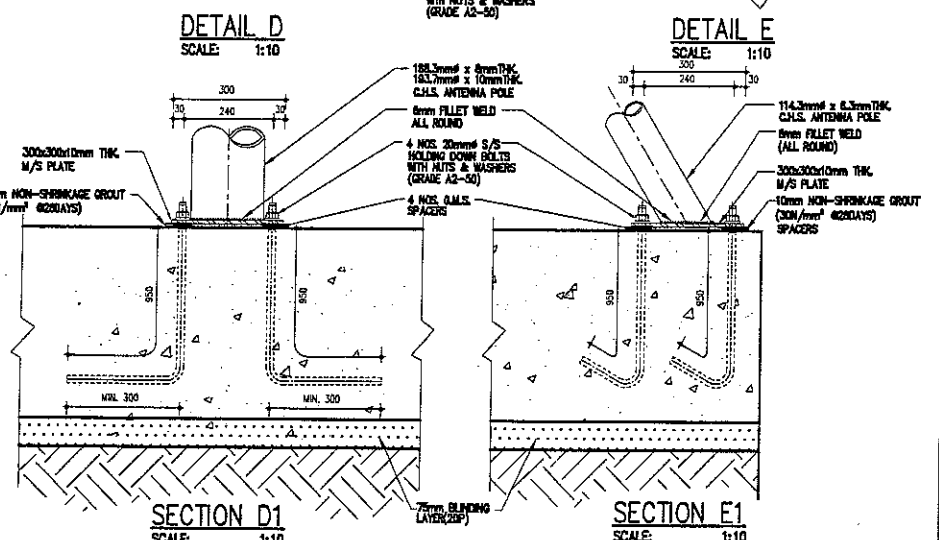
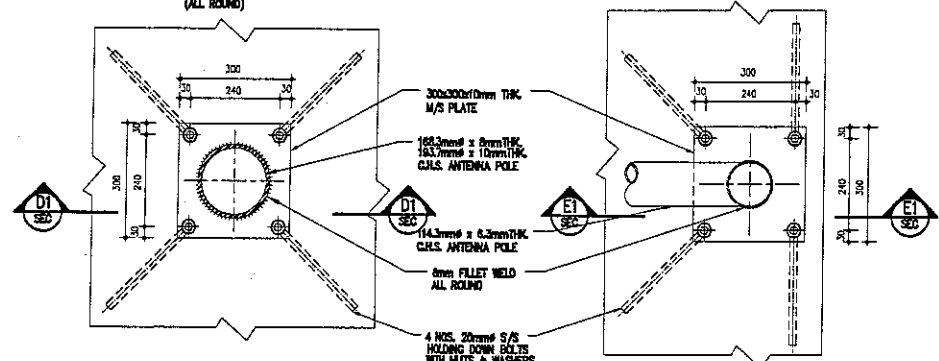
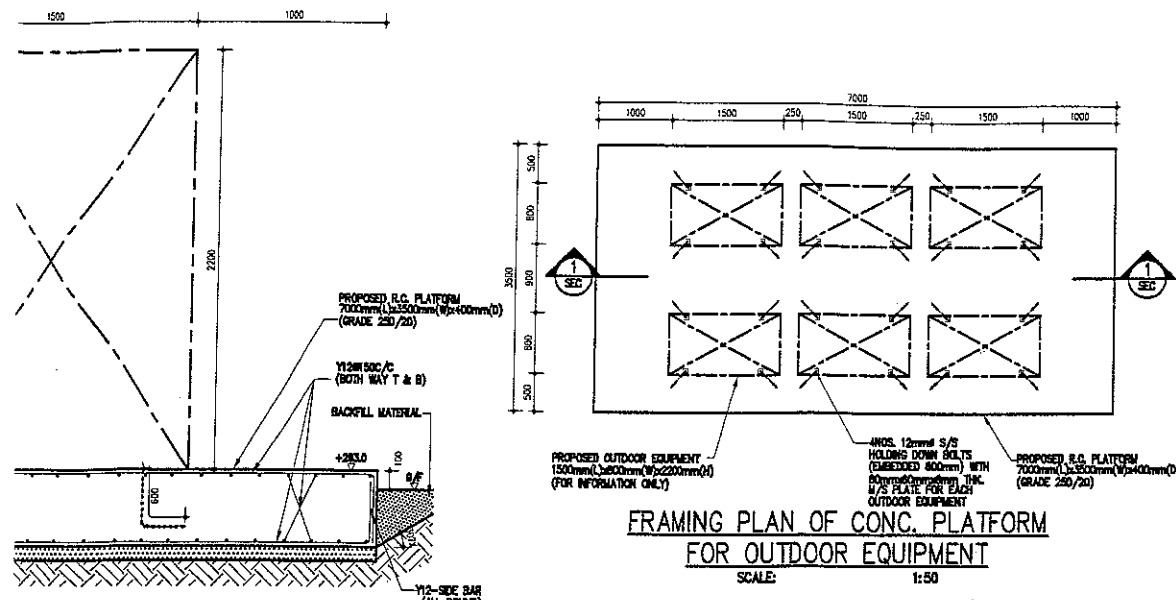
DETAIL A
SCALE: 1:10



DETAIL C
SCALE: 1:20



FOOTING FRAMING PLAN OF ANTENNA
SCALE: 1:20



B.D. REF :
F.S.D. REF :

- NOTES:
1. WORK FROM FIGURED DIMENSIONS ONLY.
 2. ALL DIMENSIONS SHALL BE VERIFIED ON SITE BY THE CONTRACTOR.
 3. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH RELEVANT SPECIFICATIONS, CONDITIONS OF CONTRACT AND ALL OTHER RELEVANT DRAWINGS. THE AUTHORIZED PERSON / REGISTERED STRUCTURAL ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCY FOUND THEREIN.
 4. THIS DRAWING IS NOT VALID FOR CONSTRUCTION OR OTHER PURPOSES UNLESS IT HAS BEEN SIGNED BY THE AUTHORIZED PERSON / REGISTERED STRUCTURAL ENGINEER.
 5. ALL WORKS SPECIFIED ON THIS DRAWING SHALL BE CARRIED OUT STRICTLY IN ACCORDANCE WITH PROVISIONS OF THE BUILDINGS ORDINANCE AND REGULATIONS.
 6. COPY RIGHT OF THIS DRAWING IS RESERVED BY THE AUTHORIZED PERSON / REGISTERED STRUCTURAL ENGINEER. NO PORTION OF THIS DRAWING MAY BE REPRODUCED WITHOUT HIS WRITTEN CONSENT.

REVISION	DESCRIPTION	DATE

CONSULTANT:
測建行
PRUDENTIAL SURVEYORS (INTL) LTD
TEL 25078333 FAX 25986576

AUTHORIZED PERSON & REGISTERED STRUCTURAL ENGINEER:
Dennis W.C. Wong
183.7mm x 8mm THK C.H.S. ANTENNA POLE
114.3mm x 6.3mm THK C.H.S. ANTENNA POLE
Authorized Person
Registered Structural Engineer

REGISTERED STRUCTURAL ENGINEER:
Lee Chi-Pui
183.7mm x 8mm THK C.H.S. ANTENNA POLE
114.3mm x 6.3mm THK C.H.S. ANTENNA POLE
Authorized Person
Registered Structural Engineer

PROJECT TITLE:
PROPOSED RADIO BASE STATION AT TAI TONG, YUEN LONG N.T.

DRAWING TITLE:
GENERAL NOTES, ANTENNA & OUTDOOR EQUIPMENT MOUNTING DETAILS

DATE	DRAWN	DESIGNED	CHECKED	SCALE
24/08/08	WS	LK	DW	AS SHOWN
JOB NO.: B2015		DRAWING NO.: TTCP-S2		
FILING CODE: T:\B2015\DET				
STATUS: 1ST SUBMISSION				



Photo 1: General view of the proposed area

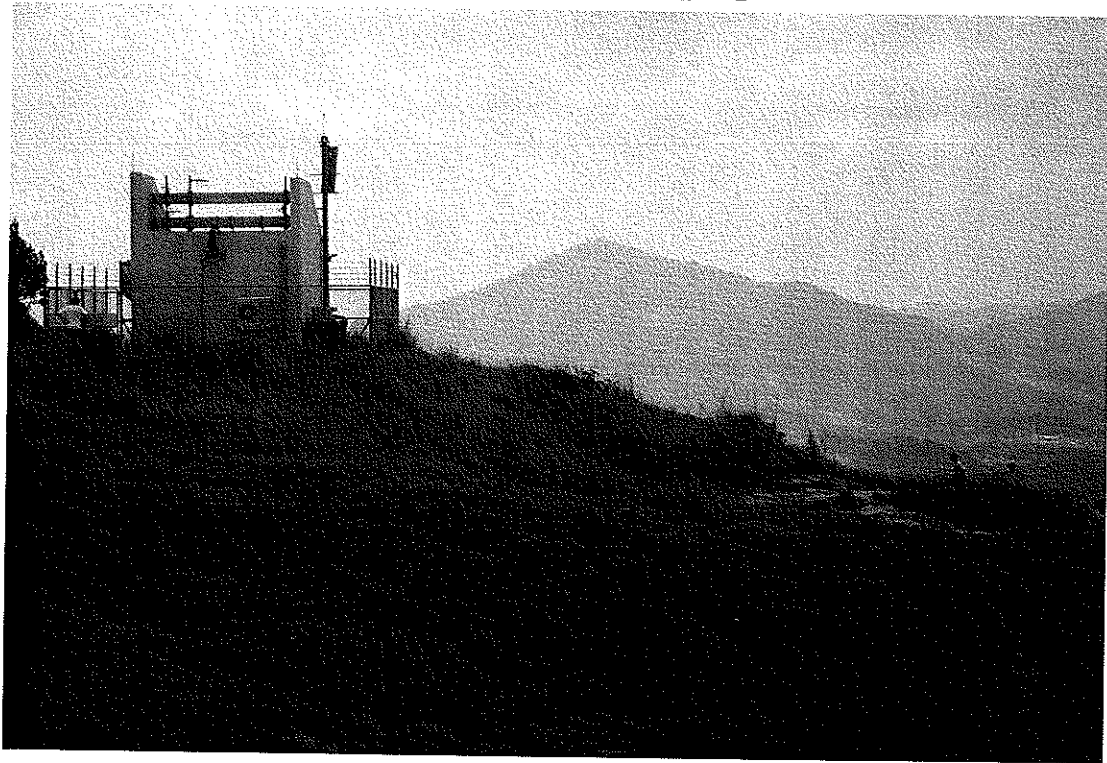


Photo 2: General view of the proposed area

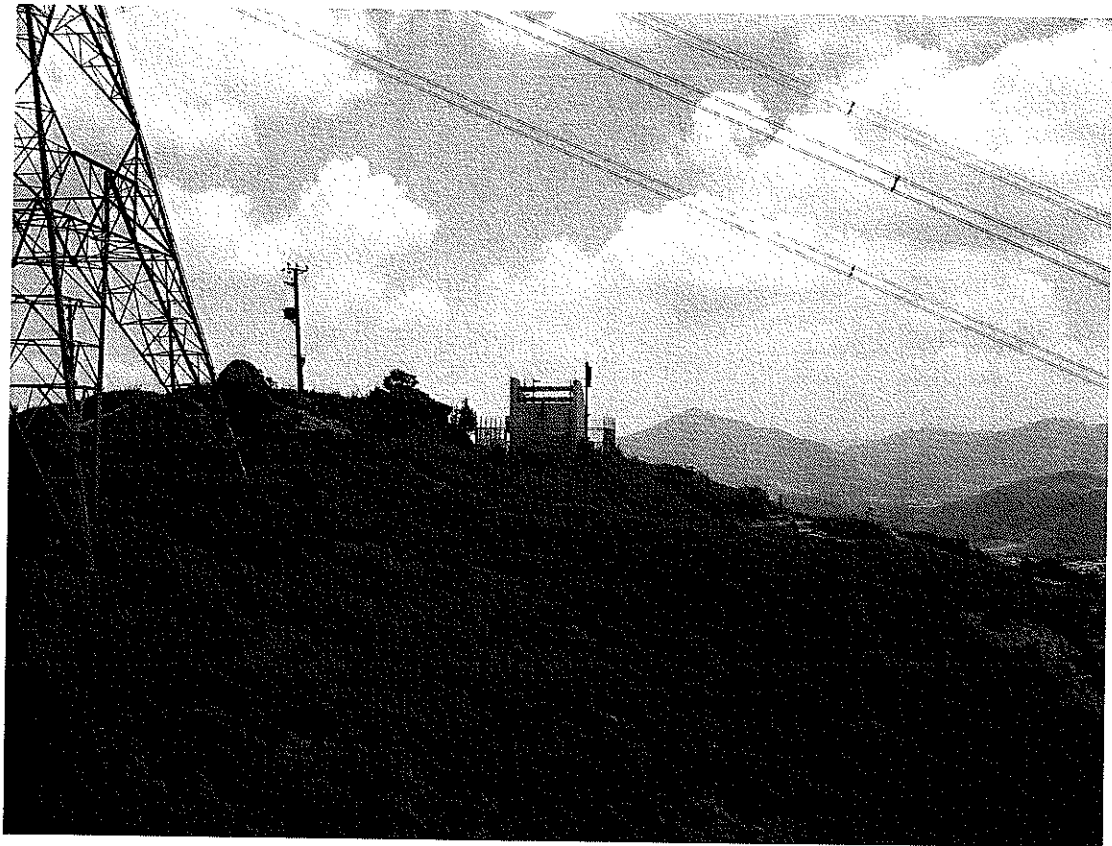


Photo 3: General view of the proposed area