## PROPOSED INSTALLATION

OF

INTEGRATED MOBILE PHONE BASE STATION

AT

SOUTH LANTAU ISLAND COUNTRY PARK,

MAN CHEUNG PO,

TAI O,

HONG KONG

PROJECT PROFILE

SMARTONE MOBILE COMMUNICATION LIMITED

Prepared by: Prudential Surveyors Int'l Ltd

March 2007

### **Basic Information**

### **Project Title**

 Proposed Installation of Integrated Mobile Phone Base Station at South Lantau Island Country Park, Man Cheng Po, Tai O.

## Purpose and Nature of the Project

 This project is a development of the SmarTone mobile phone operator to improve the mobile phone coverage for visitors of the country park and to ensure that tele-communications for the general public is maintained in case of emergency.

### Name of Project Proponent

SmarTone Mobile Communication Limited.

## Location and Scale of the Project

- 4. The integrated mobile phone base station is proposed at South Lantau Island Country Park, Man Cheng Po, Tai O as shown on the location plan at Appendix I. The station will comprise of an equipment platform [10m (1) x 8m (w) x 0.35m (D)] with an area of 80 square metres. The equipment platform, consisting of thirteen (13) mobile phone equipment cabinets, a Meter room, a MDF room and two (2) antenna poles of 5 metres, will be erected on the hill top at level 184.2mPD. The completed equipment platform with metal chain link fence will be constructed of ready mixed cast in-situ concrete. All the construction material, equipment and wastes, etc., will be transported to and away from the site by helicopter and not by hand. No haul road will be constructed.
- 5. Lands Department had not issued us a formal letter of Short Term Tenancy (STT), but had verbally agreed to the establishment of an integrated mobile phone base station at the proposed location and had given us a STT number. The formal letter of STT from Lands Department is expected to be received in mid March 2007. The relevant project leader, namely SmarTone Mobile Communication Limited, has accepted District Lands Office's offer of a Short Term Tenancy

(STT No. CX 1803).

Public utilities such as electricity supply and telecommunication lines will be installed for the integrated mobile phone base station.

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 an integrated mobile phone 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 an existing country park and it is not under exceptional cases in Section Q1 (a) to (j).

## Name and Telephone Number of Contact Person

 The contact person for this project is Mr. Sunny Pang of Smartone Mobile Communication Limited, telephone number 2297 6523 and facsimile number 2597 6560.

## Outline of Planning and Implementation Programme

### Planning and Implementation

- The project is planned and managed by SmarTone Mobile Communication
  Limited and they will install their own mobile phone network at the proposed
  station.
- 10. Upon the grant of short term tenancy and environmental permit by the District Lands Office and Environmental Protection Department respectively and consent to commence buildings works by the Buildings Department, SmarTone Mobile Communications Limited will start and complete the construction work in accordance with work schedule. The proposal had been submitted to Buildings Department (BD) for approval under the Buildings Ordinance on 27<sup>th</sup> October

2006 and subsequently approved by BD on 20<sup>th</sup> December 2007. Through BD's control processing system, no adverse comment or objection had been expressed by relevant government departments including District Planning Office (DPO), Water Supplies Department (WSD), Director of Agriculture, Fisheries and Conservation (DAFC), Drainage Services Department (DSD), District Lands Office (DLO) and Architectural Services Department (ASD). Please refer to BD's letter dated 20th December 2007 in **Appendix IV** 

### Work Schedule

11. The construction work including the equipment and antennas installation is proposed to commence in May 2007 and to be completed in beginning of June 2007. It is proposed that the mobile phone station will be put into operation in the first quarter of July 2007. The proposed work schedule is given at **Appendix II**.

It is anticipated the excavation material will be transported off the site immediately. Also the exposed excavated surface will be immediately screened with cement sand or binding layer to make the surface impervious. Furthermore, the excavation will be covered completely prior to concreting for minimizing 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 item no. 23.
- 13. Noise emission during the construction and on completion of the projects is considered to be minimal and addressed in item no. 24.
- 14. Disposal of waste including some surplus construction material and some general refuse is considered minimal and addressed in item no. 25.
- 15. Dust impact from construction activities is considered to be minimal and is addressed in item no. 26.
- Earthworks operation is not required as the excavation depth is less than 350mm 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 Integrated Mobile Phone Base Station will not cause any significant change to the environment. The site layout plan, section and typical detail of the proposed integrated mobile phone station and photographs are shown in Appendix III to illustrate the appearance of the Integrated Mobile Base Station.

## Major Elements of the Surrounding Environment

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

Countryside setting

The proposed site comprises of an equipment platform situated on the hill of the Country Park. Bushes and scrub surround the proposed equipment platform. To the north and west of the equipment platform are slopes. To the south of the equipment platform is a footpath. To the east of the equipment platform is an existing ATV building. No streams are found near the site. There is no existing or planned noise sensitive receiver located in the surrounding environment. 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 Countrypark.

The site is surrounded by Psychotria asiatica and Melastoma Candidum, which are 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. The site layout and building design will incorporate the comments of Country and Marine Park Authority. In order to further avoid the visual impact of the station, the antenna poles will be painted or coated to "Pantone 462U, BS10B25" or similar subdue colour to match the surroundings and to the satisfaction of the Country and Marine Parks Authority. As for the landscaping, all temporarily

disturbed areas should be reinstated to their original states with hydroseeding of grasses and/ or vegetated planting.

- 24. Although noise impact is anticipated to be minimal during the construction, construction activities will be carried out in daytime as far as possible (9:00-17:00). Since there will be hikers enjoying their recreational activities in the Country Park at the weekend and public holidays, no construction work will be scheduled on Sunday and public holidays in order to minimize the impact on the hikers.
- 25 All the construction material, equipment and wastes, etc., will be transported to and away from the site by helicopter and not by hand.
- 26 The site will be completely water down to minimize any dust that may be generated during the construction stage.
- 27 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.
- 28 The operation of the proposed Integrated Mobile Phone 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 the area for inhabitancy. Furthermore, the location of the emitter of the station is at least 204 metres above the human head pointing away from any human activities or inhabitance. In this case, the non-ionizing radiation has no significant impact on the public.
- 29 The Integrated Mobile 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 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

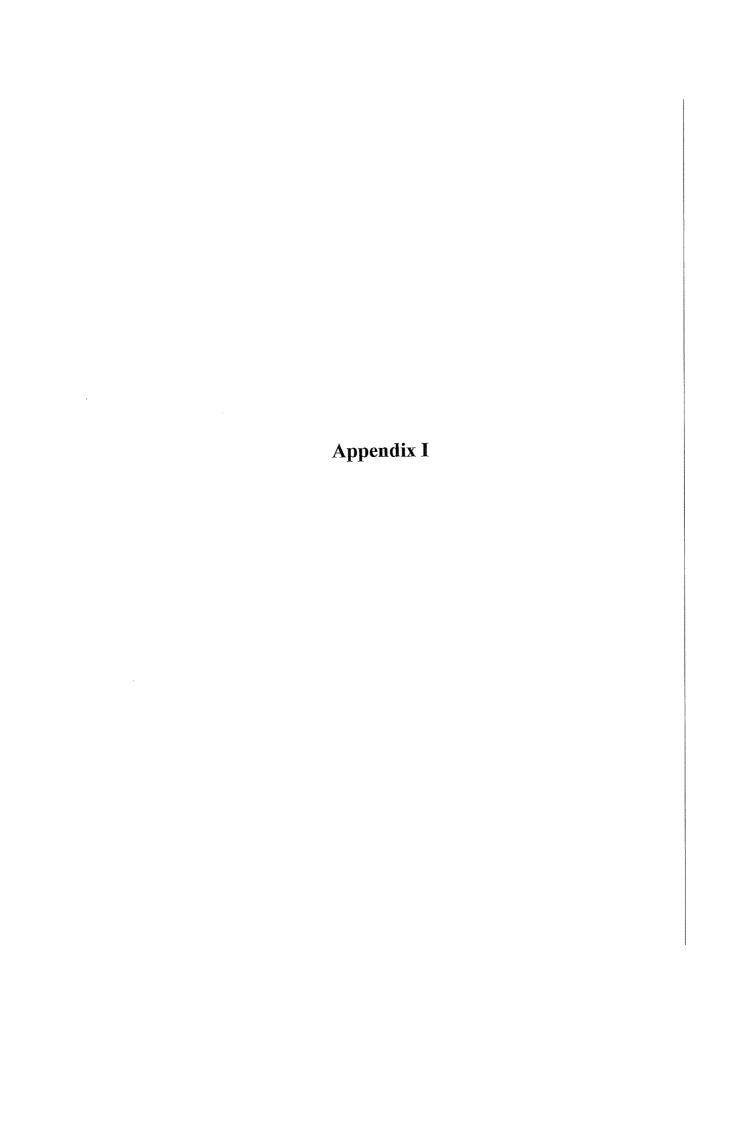
Appendix I Site Location Plan

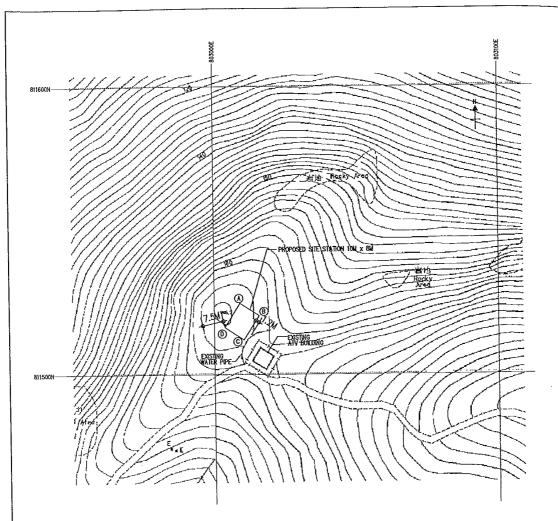
Appendix II Proposed Work Schedule

Appendix III Site Layout Plan, Section and Typical Details of the Integrated

Mobile Phone Station and Site Photo

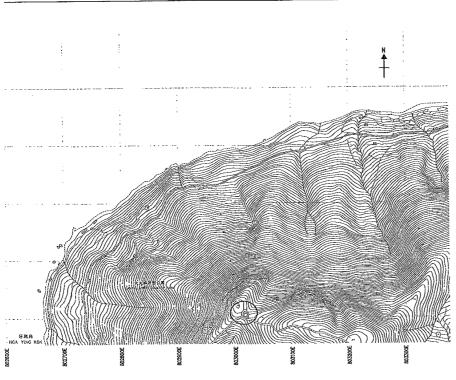
Appendix IV Buildings Department Approval Letter dated 20.12.2007



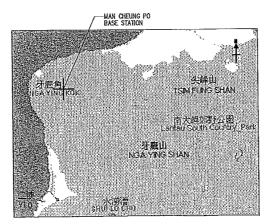


## PROPOSED SITE STATION LAYOUT PLAN SCALE: 1:1000

POINT	EAST / NORTH
Α	803009E / 811524N
В	803015E / 811520N
С	803010E / 811512N
D	803003E / 811516N



SITE MAP N. T. S.

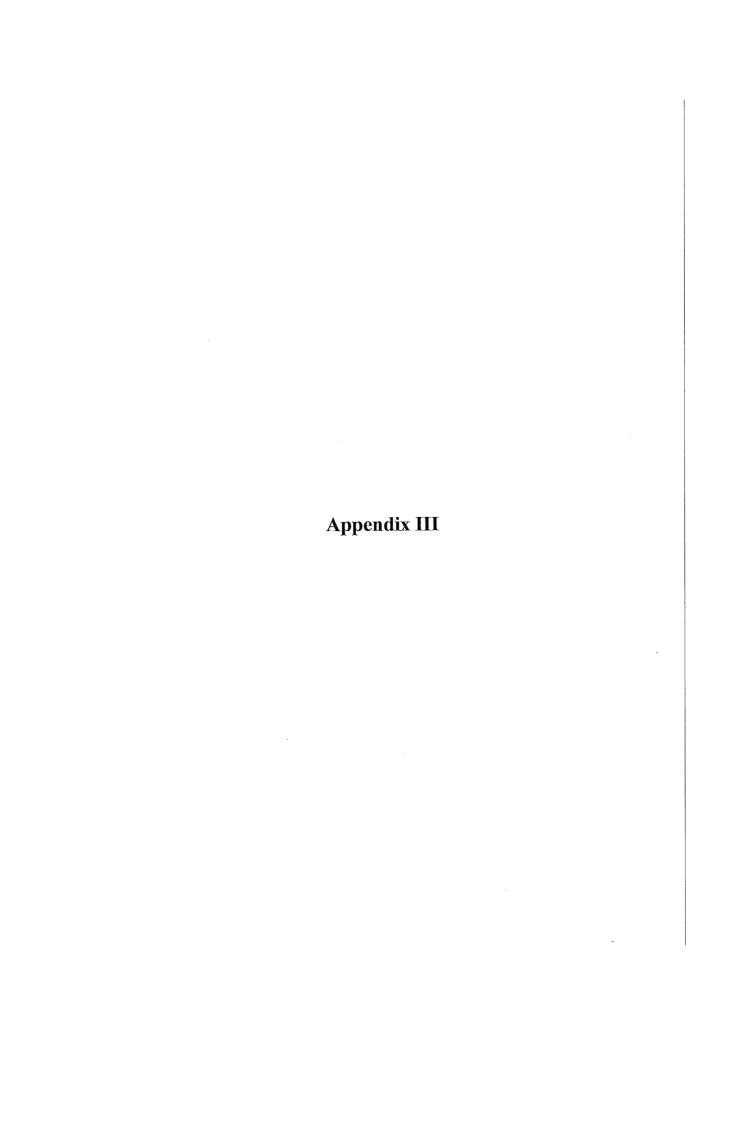


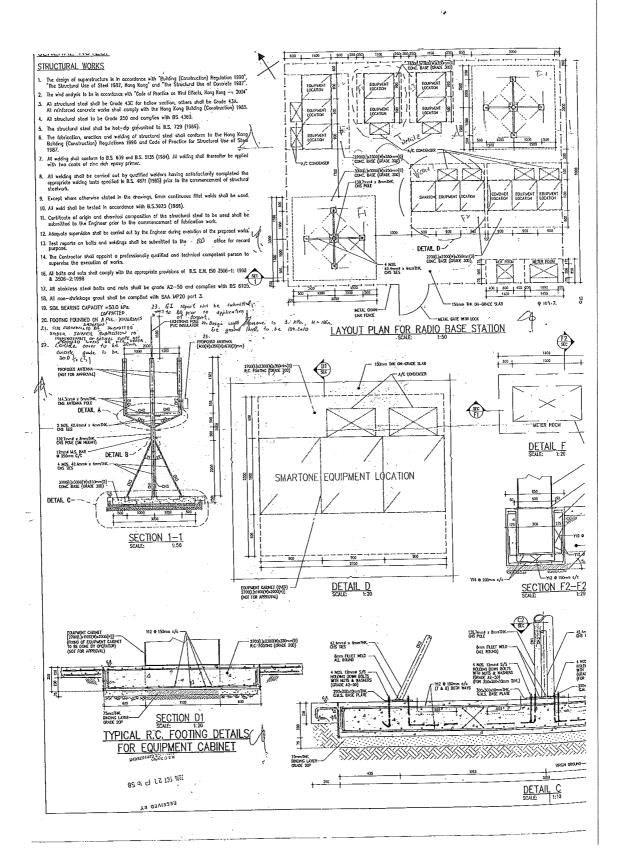
 $\underset{\text{N. T. S.}}{\underline{\text{LOCATION}}} \; \underset{\text{N. T. S.}}{\underline{\text{MAP}}}$ 

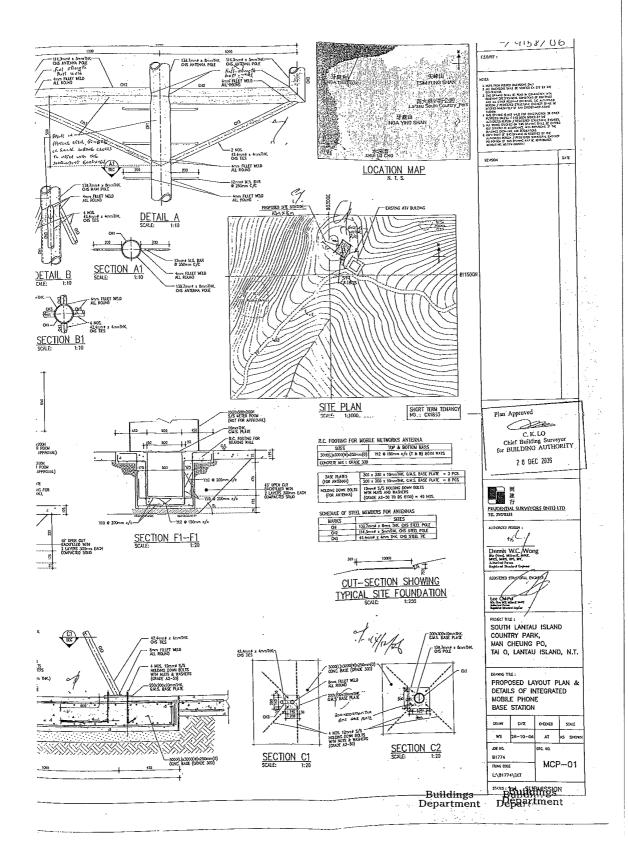


Appendix II

Project works schedule_v2 Date: Fri 3/2/07					ID Task Name  Apply for permission to District Lands Office (DLO)	
Critical Task  Progress  Milestone	ent installation	SSP				
Rolled Up Task Rolled Up Critical Rolled Up Miles	46 days	30 days	30 days	45 days	60 days	
al Task tone	Wed 5/16/07	Thu 3/15/07	Mon 4/16/07	Fri 3/2/07	Mon 1/15/07	2
	Sat 6/30/07	Fri 4/13/07	Tue 5/15/07	1	Thu 3/15/07	
Split External Tasks Project Summary					1/15	Dec Jan
		3/15		3/2		Feh Mar
	5/16		4/16	<u> </u>		Apr May
	6/30					Jun Jul







### THE PROTECTION OF EARTHWORKS AGAINST HEAVY RAINFALL

- SURFACE WATER FLOWING INTO THE SITE FROM ADJACENT GROUND SHALL BE INTERCEPTED AND CONDUCTED FROM THE SITE TO AN INDICATED SAFE DISCHARGE POINT.
- b) ALL EARTHWORKS SHALL BE GRADED AND SEALED TO ENSURE RUN-OFF AND TO AVOID PONDING.
- c) A METHOD OF WORKING SHALL BE ADOPTED TO MINUNZE THE EMPOSED BARE SOIL AT ANY TIME.
- d) WHERE TEMPORARY BARE EARTH SLOPE FACES ARE UNAVOORBUE THEY SHALL BE PROTECTED WITH SHEETING WELL-SECURED AGAINST THE WIND. WHERE SLOPE FACES ARE TO BE TEMPORARY EXPOSED FOR MORE THAN TWO MEANS TEMPORARY HARD SURFACING SHALL, BE PROVIDED AND TEMPROARY SHALL BE POSTALLED.

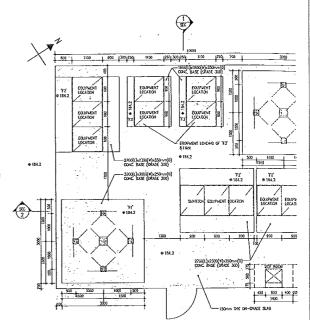
#### COMPACTION:

1) THE IN-SITU FIELD DRY DENSITIES OF COMPACTED MATERIALS SHALL NOT BE LESS THAN 95% OF THE MAXIMUM DRY DENSITY DESCRIBED

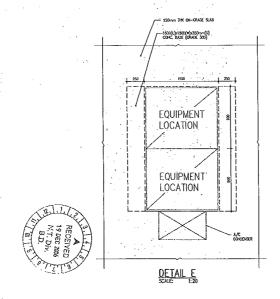
TABLE 1:

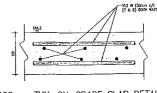
DESCRIPTION	SIZE OF AREA OF FILL IN BATCHX	NO OF DETERMINATIONS PER BATCHX
	0-100m²	3
FILL IN EXCAVATIONS	100-500m²	2 FOR EACH 100m OR PART THEREOF
	EXCEEDING 500m²	1 FOR EACH 100m OR PART THEREOF

X A BATCH OF FILL MATERIAL IS ANY QUANTITY OF FILL MATERIAL
OF THE SAME TYPE AND HAS SIMILAR PROPERTIES THROUGHT

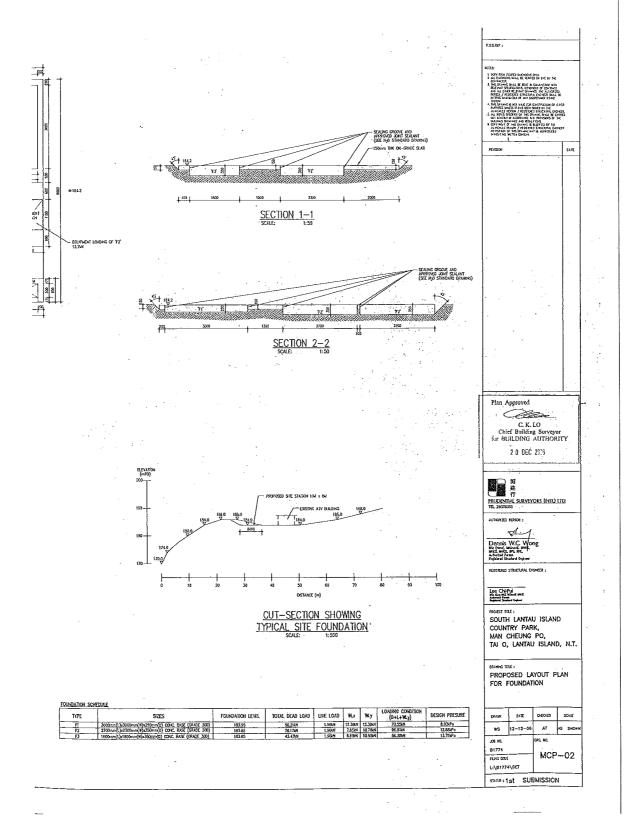


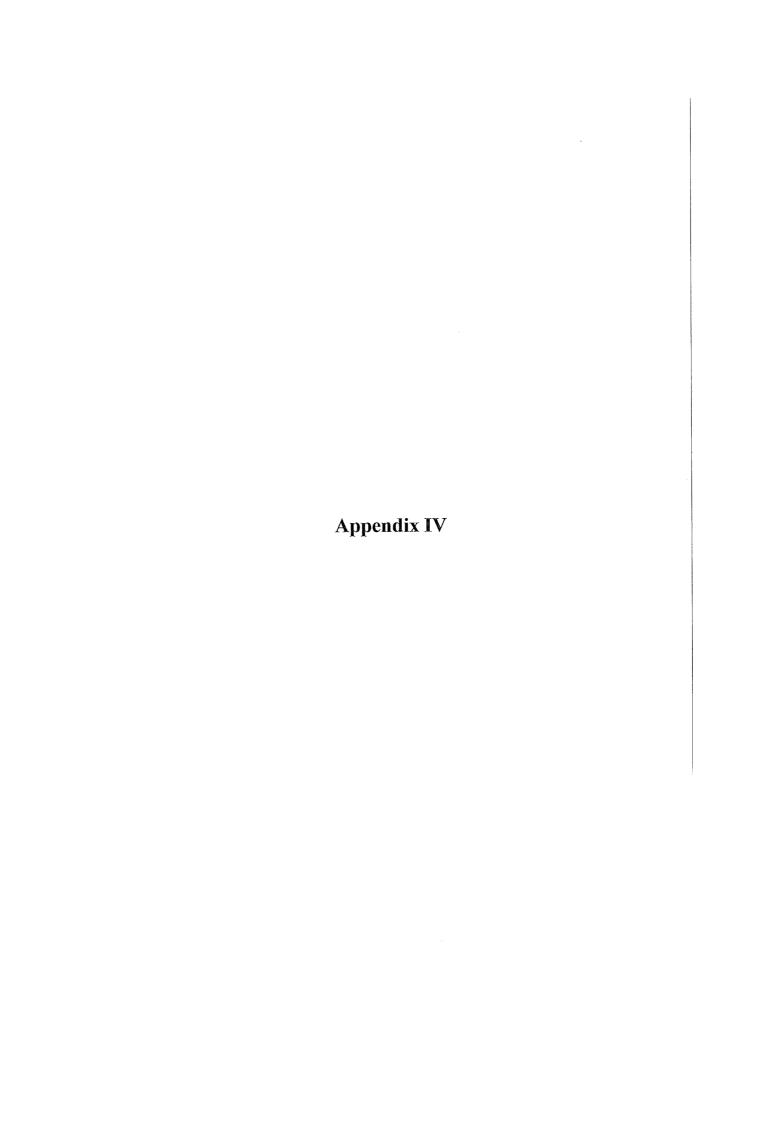
LAYOUT PLAN FOR FOUNDATION SCALE: 1:50





150mm THK. ON-GRADE SLAB DETAIL







Picture 1: Location of the Proposed Integrated Mobile Phone Station



Picture 2: Location of the Proposed Integrated Mobile Phone Station

Appendix V



YOUR REF 來函檔號:

OUR REF 本署檔號: FAX 圖文傳真: TEL 電話:

TEL 電話: www.bd.gov.hk BD 2/9158/06 2845 1559 2626 1278

Mr. WONG Wing-cheung Dennis

12/F., Asian House, 1 Hennessy Road, Hong Kong

December 2006

Dear Sir,

## South Lantau Island Country Park, Man Cheung Po, Tai O, Lantau Island - STT CX 1803

I refer to your application dated <u>received on 27 October 2006 and the supplementary information received on 19 December 2006</u> for approval of proposals in respect of <u>Building, Foundation and Superstructure</u>.

- 2. Your submission of plans has been checked under the curtailed check system announced in Practice Notes for Authorised Persons & Registered Structural Engineers 272. On this basis, I am satisfied that your submission is fundamentally acceptable and may be approved.
- 3. You are reminded that the curtailed check system covers only the fundamental issues of a building proposal. Although non-fundamental issues will not be raised as reasons for disapproving a submission, I expect that all contraventions of the Buildings Ordinance and its subsidiary legislation are rectified as and when they are discovered and in any event, before completion of the works is certified. In this connection, I ask you to note that the Building Authority attaches great importance to the proper assumption of duties and responsibilities by authorised persons and registered structural engineers.
- 4. In accordance with the provisions of regulation 30(1) of the Building (Administration) Regulations, this is to notify that the <u>above mentioned</u> plans submitted with your application dated <u>received on 27 October 2006 and the supplementary information received on 19 December 2006</u> are hereby approved. One set of the said plans, on which I have signified my approval, is enclosed. Your client has been sent a copy of this letter but I would request that you ensure that the contents are understood by him.
- 5. This approval should not be deemed to confer any title to land or to act as a waiver of any term in any lease or licence. This approval does **NOT** authorise the commencement or the carrying out of any works shown in the approved plans. Section 14(2) of the Buildings Ordinance refers.

6. Please see attached sheet.

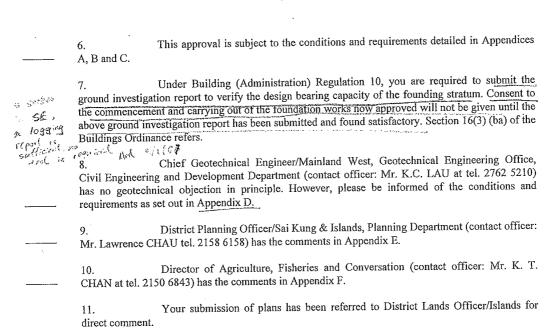
c.c. Smartone Mobile Communication Ltd. 12/F, Somerset House, 979 King's Road, Quarry Bay, Hong Kong

> DPO/SK & Is CGE/MW, GEO DAF&C

DLO/Is DFS CO/SM (LO Cho-ki) Chief Building Surveyor for Building Authority

Yours sincerely,

S.L. 9 (02/2004)



It is noted that you/RSE amended the plans on 14.12.2006 and additional drawings

were submitted on 19.12.2006. Please forward a copy of the approved plans to all the concerned

departments for reference.

Ref: BD 2/9158/06

Address: South Lantau Island Country Park, Man Cheung Po, Tai O, Lantau Island - STT CX

<u>1803</u>

Appendix A to approval dated 2 0 DEC 2006

## Reinforced Concrete Works

In giving this approval of plans, I hereby impose the following conditions under item 6 in section 17(1) of the Buildings Ordinance:

- (a) Sampling and testing of steel reinforcement should be carried out in accordance with Practice Note for Authorized Persons and Registered Structural Engineers 122 (PNAP 122) current at the date of this approval. Testing should be carried out by a laboratory\* accredited under the Hong Kong Laboratory Accreditation Scheme (HOKLAS) for the particular test concerned. Test results should be reported on a HOKLAS Endorsed Certificate and submitted within 60 days of the delivery of the steel reinforcement to the site. The test reports should be appended with a statement signed by the Authorized Person/Registered Structural Engineer to confirm the following:
  - (i) All steel reinforcement used for the construction and the test specimens covered by the test reports are in accordance with the types and grades of steel shown in the approved plans.
  - (ii) Sampling and testing of steel reinforcement used have been carried out in accordance with the current PNAP 122.
  - (iii) The acceptance criteria appropriate to each type and grade of steel reinforcement used have been complied with.
  - (iv) All steel reinforcement tests have been carried out by a laboratory\* accredited under HOKLAS.
  - (b) Sampling of concrete and compression testing of concrete test cubes should be carried out in accordance with the methods specified in CS1:1990. Testing should be carried out by a laboratory\* accredited under HOKLAS for the particular test concerned. Test results should be reported on a HOKLAS Endorsed Certificate and submitted within 21 days after testing. The test reports\* should be appended with a statement signed by the Authorized Person/Registered Structural Engineer to confirm the following:

- (i) All concrete used for the construction and concrete cubes covered by the test reports are in accordance with the concrete grades shown in the approved plans.
- (ii) Concrete cube sizes, rates of sampling fresh concrete for testing and acceptance criteria for compressive strength set out in Building (Construction) Regulations have been complied with.
- (iii) All concrete cube tests have been carried out by a laboratory\* accredited under HOKLAS and in accordance with the methods specified in CS1:1990.
- (c) Qualified site supervision of the reinforced concrete works and of the sampling of concrete and making and curing of test cubes, by an experienced and competent person, should be provided to ensure that the works are carried out in accordance with the plans approved and that the required standards are complied with.
  - \* A Directory of Accredited Laboratories in Hong Kong is obtainable from the Hong Kong Accreditation Service (HKAS) Executive, Innovation and Technology Commission.

Up-to-date information on accredited laboratories and their scopes of accreditation are available on the internet at the HKAS website at http://www.info.gov.hk/itc/hkas/.

A laboratory's accreditation for an individual test or calibration may be granted, modified or withdrawn at any time. To ensure that the test that you commission the laboratory to conduct is within its scope of accreditation, please always insist on test results be reported on a HOKLAS Endorsed Certificate.

# The test reports, when submitted, should be appended with a summary which contains information on locations of concerned structural elements, concrete grades and dates of cast. The summary should also include previous summary information of concrete cube test reports in chronological order. Ref: BD <u>2/9158/06</u>

Address: South Lantau Island Country Park, Man Cheung Po, Tai O, Lantau Island - STT CX

1803

Appendix\_6\_\_ to approval dated 2 0 DEC 2006

### Structural Steel Works

In giving this approval of plans, I hereby impose the following conditions under item 6 in section 17(1) of the Buildings Ordinance:

- (a) Qualified site supervision of the structural steel works, including fabrication, erection and examination of the structural elements, by an experienced and competent person should be provided to ensure that the works are carried out in accordance with the plans approved and that the required standards are complied with.
- (b) For welding of structural steel works, welding procedures and welders should be assessed/tested in accordance with the appropriate provisions of British Standards BS 4870, BS 4871 and BS 4872.
- 2. Under Building (Administration) Regulation 10, a copy of mill certificates of the structural steel used, is required to be submitted which should be appended with a statement signed by the authorized person/registered structural engineer to confirm that the requirements of chemical composition and mechanical properties appropriate to the type of steel have been complied with.

Ref: BD <u>2/9158/06</u>

Address: South Lantau Island Country Park, Man Cheung Po, Tai O, Lantau Island - STT CX 1803

Appendix C \_\_\_\_\_ to approval dated \_2 0 DEC 2006

### Foundation Works (Spread Footings/Rafts)

In giving this approval of plans, you are reminded that site supervision of the foundation works by a team of supervisors shall be provided each by the Authorized Person, the Registered Structural Engineer and the Registered Specialist Contractor / Registered General Building Contractor in accordance with the Technical Memorandum for Supervision Plans and the Code of Practice for Site Supervision to ensure that the quality of the foundation works is up to standard and that the works are carried out in accordance with the plans approved and in such a manner as not to render inadequate the margin of safety of, or impair the stability of, or cause danger to any building, structure, land, street or services. Details of site supervision for the foundation works shall be included in the supervision plan and submitted prior to or at the time of application for consent to the commencement of the foundation works.

- 2. In connection with paragraph 1 above regarding inspection of bearing stratum to check for compliance with approved plans, site investigation reports and design assumptions, the Buildings Department should be notified of the time and date of the inspection so that it may be witnessed by a representative from the Department.
- 3. Under Building (Administration) Regulation 10, two sets of foundation record plans and report together with the Form BA 14 stipulated in Building (Administration) Regulation 25 to certify the completion of the foundation works are required to be submitted. The record plans should show the characteristic features of the site and the identification, location, size and founding level of each foundation unit as constructed

### Ref: BD 2/9158/06

Address: South Lantau Island Country Park, Man Cheung Po, Tai O, Lantau Island - STT CX 1803

APPENDIX \_\_\_\_\_ TO APPROVAL DATED \_\_\_\_\_ 2 0 BEC 2006

## **BUILDING PLAN SUBMISSION**

- 1. Please be informed that site formation submissions should contain the following information, failing which approval may be refused under the Buildings Ordinance Section 16(1):
  - 1.1 Site formation plans and appropriate supporting geotechnical documentation taking into consideration the requirements of Building (Admin) Regulation 8(1)(bb) with particular emphasis on:
    - 1.1.1 the provision of support and strengthening of existing retaining walls and/or slopes both during construction and in the long term, and a report of an investigation of the effects of intended construction works on existing walls and/or slopes, including demonstration of compliance with B(C)R 20.

Appendix E

## STT CX 1803 South Lantau Island Country Park, Man Cheung Po Tai O, Lantau Island

I refer to your above-quoted memo and the accompanying building plan (Drawing No. MCP-01) received by this Office on 9.11.2006.

## Statutory Comment

The subject site is not covered by any statutory town plans. 2.

- However, it falls within the Lantau North Country Park. Subject to AFCD's comment, we Other Comment have no objection to the development proposal as shown on the submitted building plan.
- The above comments on the building plan submitted may be subject to revision should there be a change in circumstances before a decision on the building plan is made by the Building Authority.

(Lawrence CHAU) for District Planning Officer/ Lantau and Islands Planning Department

From         Director of Agriculture, Fisheries & Conservation           Ref.         (9)         in         AF GR CPDA LN/98/2006           Tel No.         2150 6843           Fax No.         2199 7044           Date         20 November 2006	To Chief Building Surveyor/NTE, Building Department  (Attn. Mr. Y. K. YIM  Your Ref. (6) in BD 2/9158/06  Dated 7 November 2006 Fax No. 2845 1559  Total Pages 1
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## South Lantau Island Country Park, Man Cheung Po, Tai O Lantau Island - STT CX 1803

I refer to your memo under reference.

- I have the following comments on the proposed installation of Mobile Phone Base Station:-
  - All antenna poles should be painted in Pantone 462U, BS10B25 or similar subdue i) colours upon completion to match with the surrounding environment.
  - All temporarily disturbed areas should be reinstated back to their original states with ii) hydroseeding of grasses and/or vegetation planting.

(K. T. CHAN)

for Director of Agriculture, Fisheries & Conservation

Prudential Surveyors International Ltd.

(Attn.: Mr. Dennis W. C. WONG)

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