Installation of Mobile Phone Base Station at Bride's Pool Road within Pat Sin Leng Country Park 於八仙嶺郊野公園新娘潭路安裝 流動電話基台

Project Profile 工程項目簡介

Hong Kong CSL Limited 香港流動通訊有限公司

Prepared by : Mouchel Asia Limited 由 萬 碩 亞 洲 顧 問 工 程 公 司 制 定

> April 2001 二零零一年四月

Contents

1.0	BASI	C INFORMATION	1
	1.1	Project Title	1
	1.2	Purpose and nature of the project	
	1.3	Name of Project Proponent	1
	1.4	Location and scale of project	1
	1.5	Number and Types of designated projects to be covered by the project profile?	2
	1.6	Name and telephone number of contact person(s)	2
2.0	OUT	LINE OF PLANNING AND IMPLEMENTATION PROGRAMME	2
	2.1	How will the project be planned and implemented	2
	2.2	What is the project time table	
	2.3	Are there any interactions with broader programme requirements or other projects	S
		that shall be considered	
3.0	MAJ	OR ELEMENTS OF THE SURROUNDING ENVIRONMENT	2
	3.1	Outline existing and planned sensitive receivers and sensitive parts of the natural	
		environment which might be affected by the proposed project	
4.0	POSS	SIBLE IMPACTS ON THE ENVIRONMENT	4
	4.1	Outline any processes involved, including process flow diagrams, site plans,	-
		storage requirements and information on emissions and discharges	4
	4.2	Describe the environmental impacts or issues that arise during the construction,4	4
		operation or decommissioning of the project, where applicable	
		4.2.1Construction Phase	
		4.2.20perational Phase	5
5.0	ENV	IRONMENTAL PROTECTION MEASURES TO BE INCORPORATED	6
	5.1	Describe measures to minimise environmental impacts	
	5.2	Comment on the possible severity, distribution and duration of environmental	
		effects	7
	5.3	Comment on any further implications	
	5.4	Use of previous approved EIA	

ATTACHMENT

- 1 Site Location Map
- 2 Proposed TCSL Site Coverage Map
- 3 Equipment Shelter Layout
- 4 Construction Details
- 5 Details of Equipment Shelter and Isometric View
- 6 Indicative Works Programme
- 7 Recommended Pollution Control Clauses

PROJECT PROFILE

1.0 BASIC INFORMATION

1.1 Project Title

Installation of Mobile Phone Base Station at Bride's Pool Road within Pat Sin Leng Country Park.

1.2 Purpose and nature of the project

Since hill fire in the Pat Sin Leng Country Park, a Government inter-department Investigation Team has urged mobile phone operators to provide full coverage of their services in the countryside. The project is a development involving mobile phone network operator Hong Kong CSL Limited aimed to improve the mobile phone coverage in this area and provide the alternative means of communication for hikers and visitors of the Country Park. This requires a Mobile Phone Base Station to be constructed within the Pat Sin Leng Country Park.

1.3 Name of Project Proponent

Hong Kong CSL Limited.

1.4 Location and scale of project

The proposed Mobile Phone Base Station will be constructed within the Pat Sin Leng Country Park as shown on the location plan in Attachment 1. A total area of 8.5 m² will be involved. The construction work will comprise the installation of a stand-alone Mobile Phone Equipment Base Station which will comprise one equipment shelter for mobile phone network and one 10m high antenna pole for 800/900MHz mobile networks. The equipment shelter, locating behind a carpark lay-by at Bride's Pool Road, will take up $7.5m^2$ and the proposed antenna pole, between a lamp pole and a mature tree, will take up another $1m^2$ for the mass concrete foundation. A concrete trench of 350mm wide and 300mm deep will be constructed along the edge of the footpath in order to connect the proposed equipment shelter and the antenna pole. The proposed locations are shown in Attachment 1. Metal fencing surrounding the station, together with a telephone line and electric facilities will be provided prior to the construction of the Mobile Phone Base Station.

The Country and Marine Parks Authority and the Office of Telecommunications Authority have agreed to the establishment of a Mobile Phone Base Station at the proposed location. The radio coverage and the impact to the environment are the salient factors in the site selection process. The proposed site has been selected as it is considered to provide the best radio coverage to the Pat Sin Leng Country Park (attachment 2).

The details of the construction works are shown in Attachment 3 to 5.

1.5 Number and Types of designated projects to be covered by the project profile

In accordance with EIAO, Schedule 2, Part 1, Section Q1, the proposed project is a designated project as it involves building works in an existing country park and it is not considered exempt under Section Q.1 (a) to (j). Therefore, an Environmental Permit under the EIA Ordinance must be obtained prior to the commencement of construction.

1.6 Name and telephone number of contact person(s)

2.0 OUTLINE OF PLANNING AND IMPLEMENTATION PROGRAMME

2.1 How will the project be planned and implemented

The project is a stand-alone development to install telecommunications equipment for networks in the proposed site.

The short term tenancy (STT 1144) had been granted by the District Lands Office, North. An environmental permit will also be required prior to the commencement of the construction works.

The works will be carried out by a registered Contractor.

2.2 What is the project time table

Construction is expected to commence in July 2001 and continue for 3 months, ending in September 2001. The exact timing of the construction events will be dependent upon the Contractor=s programme. However, an estimation of the duration of the key construction activities is given below:

Foundation work for the site	2 weeks
Telephone line & electric facilities	2 weeks
Metal fence installation	2 weeks
Antenna pole installation	2 weeks
Equipment installation	2 weeks
Commission test	1 week

An indicative works programme is presented in Attachment 6.

2.3 Are there any interactions with broader programme requirements or other projects that shall be considered No.

3.0 MAJOR ELEMENTS OF THE SURROUNDING ENVIRONMENT

3.1 Outline existing and planned sensitive receivers and sensitive parts of the natural

environment which might be affected by the proposed project

Background

The site area falls within the Pat Sin Leng Country Park area, 4m from the public parking and lay-by area for private car and tourist coaches. Bride's Pool Road provides direct access to the proposed site. The site is close to the maintenance steps built along the crest of the existing registered slope 03SE-B/C136(1) managed by Geotechnical Engineering Office. A BBQ area and a pavillion are in the vicinity but located over 50m away from the proposed site.

No declared monument or site of cultural heritage will be affected by the proposed work.

<u>Noise</u>

The visitors to the country park will be Noise Sensitive Receivers (NSRs). However, the BBQ area and the pavillion are over 50m away from the proposed site.

Air quality

Although the Bride's Pool Road is a source of air pollution, the level of traffic is low on weekdays. Thus, the background air quality overall is considered to be fair. No other source of air pollution has been identified.

Water Quality

No watercourse was identified within the site boundary.

Ecology

The equipment shelter will be built in the understorey of a woodland habitat which is quite close to the maintenance steps. Although the site is located within a woodland, the affected habitat contains only common shrubs, grass and herb species together with a few tree saplings. The species recorded within the site include saplings of *Schefflera octohpylla* and a single stand of *Mallotus paniculata* which has a diameter of 0.05m and approximate height of 4m, with the remaining species being largely common herb and grass species. No rare plant was observed. The habitat also supports a limited number of invertebrate and avifauna. In general, this woodland understorey habitat is considered to be of low ecological importance due to its low species diversity and its proximity to areas of human disturbance.

The 10m high antenna will be built on the grassland in between a lamp pole and a mature *Bombax* tree which is approximately 0.25m in diameter and over 10m in height. This impacted habitat is dominated by a fern species, *Christella* sp. which is very common throughout Hong Kong.

Landscape and Visual

In accordance with the criteria stated in WBTC No.24/94 that a plant is considered as a tree if its diameter measures 95mm, no trees have been identified within the proposed site boundary.

4.0 POSSIBLE IMPACTS ON THE ENVIRONMENT

4.1 Outline any processes involved, including process flow diagrams, site plans, storage requirements and information on emissions and discharges

A typical construction sequence will include foundation work, installation of telephone lines, metal fence and antennae erection.

The location plan and construction details are shown on Attachment 1 to 5 respectively and an indicative works programme is presented in Attachment 6. The work period for the installation of equipment shelters, antennae and metal fencing will last for about three months.

4.2 Describe the environmental impacts or issues that arise during the construction, operation or decommissioning of the project, where applicable

4.2.1 Construction Phase

<u>Noise</u>

Noise during the construction phase will be generated from powered mechanical equipment (PME) being used only during construction of the antenna pole base. The equipment detailed in Table 1 will be used for the concrete work.

Table 1 :Predicted Sound Power Levels for the Concrete Base of the Antenna
Poles Construction

Powered Mechanical Equipment	ID Code	Sound Power Level dB(A)
Concrete lorry mixer	CNP044	109
Dumper	CNP066	106

As the distance from the BBQ area and the pavillion is over 50m, noise levels would be expected to be in the region of 72dB(A) which is less than the 75dB(A) criteria. As such no adverse noise impacts are anticipated.

<u>Air Quality</u>

Due to the distance from the human activities, no adverse impacts are anticipated.

Water Quality

No adverse water quality impacts are anticipated.

Waste Management

The amount of construction waste to be produced is expected to be relatively small and the nuisance and visual intrusion to visitors is predicted to be insignificant due to the distance from the visitors and the short term nature of the activities. However, in order to prevent unnecessary landtake or land disturbance, placement of waste materials should be done with care.

Ecology

The loss of $7.5m^2$ woodland understorey habitat and $1m^2$ fern habitat will be unavoidable. However, these affected habitats are considered to be of low ecological importance. In view of the low ecological importance of these habitats, in addition to the small area loss, the ecological impact of this project is considered to be insignificant.

In accordance with the WBTC No.24/94, a plant is considered as a tree if its diameter measures 95mm. Therefore, no tree was recorded within the proposed site boundary. However, the antenna will be constructed at a distance of 1.5m from the trunk of a *Bombax* tree. The antenna base will only require excavation of an area of 1m deep and 1m wide but due to the small scale of the work, the roots of the *Bombax* tree are not anticipated to be adversely affected. However, there may be adverse impact on the tree branches during the antenna erection and particular care should be taken to avoid damage to the branches. Adjustment will be made on site to keep the antenna pole as far as possible from the tree such that the adverse impacts on this *Bombax* species can be minimised. The construction of concrete trench will not result in any significant impacts due to the affected habitats are highly disturbed grasslands and the small area loss. Thus, the impacts are considered to be insignificant.

No other area of ecological importance will be impacted.

Landscape and Visual

The potential visual and landscape impacts on the hikers and visitors will be very minor as the BBQ area and the pavillion are located 50m away from the closest site area. In addition, the mature trees growing on the woodland edge will effectively screen off any adverse visual impacts.

4.2.2 Operational Phase

As the proposed Mobile Phone Base Station will be close to the public open parking area and the road, the operation will strictly comply with the "Code of Practice for the Protection of Workers and Members of Public Against Non-Ionising Radiation Hazards from Radio Transmitting Equipment" issued by OFTA. No other operational phase impacts are predicted.

5.0 ENVIRONMENTAL PROTECTION MEASURES TO BE INCORPORATED

5.1 Describe measures to minimise environmental impacts

<u>Noise</u>

Noise impacts will not be significant. However, it is recommended that no construction work should be scheduled on Sunday or public holidays as the Country Park will be subject to most frequent use during these days in order to keep any nuisance to a minimum level.

Air Quality

Stockpiles should be enclosed or covered and watered during dry or windy conditions. Watering exposed surfaces could reduce dust emissions. In addition, with the adoption of the relevant pollution control clauses in the construction Contract as detailed in Attachment 7, environmental nuisance can be kept to a minimum.

Ecology

Care should be taken to avoid damage to areas that do not require any work. Storage of material subject to run-off and exposed areas of soil should be kept to a minimum, especially during the wet season. It shall be specified in the Contract that unnecessary land take during construction should be strictly prohibited.

Particular care should be taken during the antenna erection. Every effort should be made to avoid the damage caused to this mature *Bombax* tree. Adjustment should be made if the tree is affected.

Landscape and Visual

In order to mitigate the visual impact of vegetation removal, all the equipment shelters, metal fencing and antenna pole shall be painted to a subdued color which blends with the surrounding. The Project Proponent will carry out plantation of trees in front of the Mobile Phone Base Station in order to keep the visual impact to a minimum.

Waste Management

The waste material should be stockpiled inside the site area and be removed off site as soon as possible. Relevant pollution control clauses as detailed in Attachment 7 will be included in the construction Contract so as to minimize the environmental nuisance to the sensitive receivers.

5.2 Comment on the possible severity, distribution and duration of environmental effects

The resulting environmental impacts are considered to be insignificant due to the small scale of the project, both in terms of area and timescale, and the limited number of sensitive receivers present. Although the proposed site is located in the Country Park and within a woodland habitat, the woodland habitat loss is of low ecological importance. The ecological impact, therefore, is insignificant.

No other adverse impacts will be expected after the application of the full set of recommended mitigation measures together with the pollution control clauses.

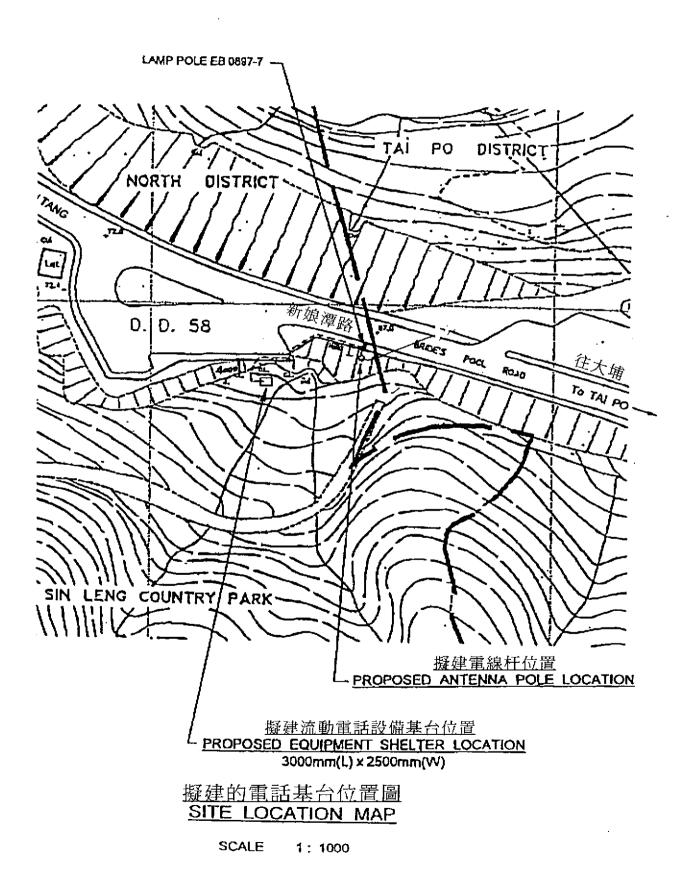
5.3 Comment on any further implications None

5.4 Use of previous approved EIA None

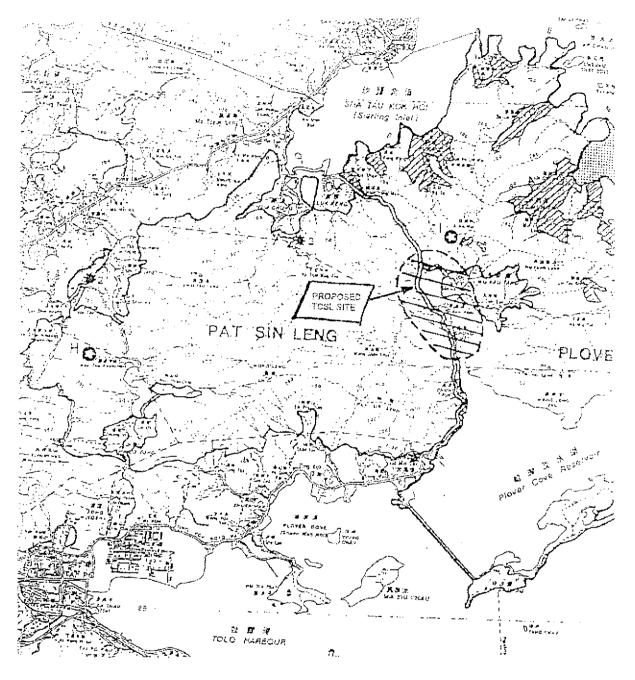
ATTACHMENT 1 附件1

LEGEND:

----- FEEDER CABLE ROUTE 電纜路線



ATTACHMENT 2 附件2



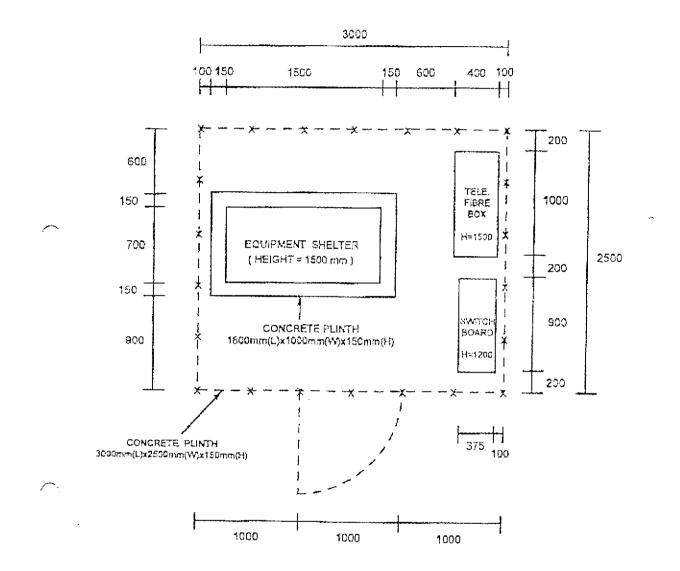
LEGEND :

 $\langle \langle \rangle \rangle$

Tost SITE APPROXIMATE COVERAGE 流動電話基台的覆蓋範圍

> <u>PROPOSED TCSL SITE COVERAGE MAP</u> 擬訂的流動電話基台覆蓋範圍圖

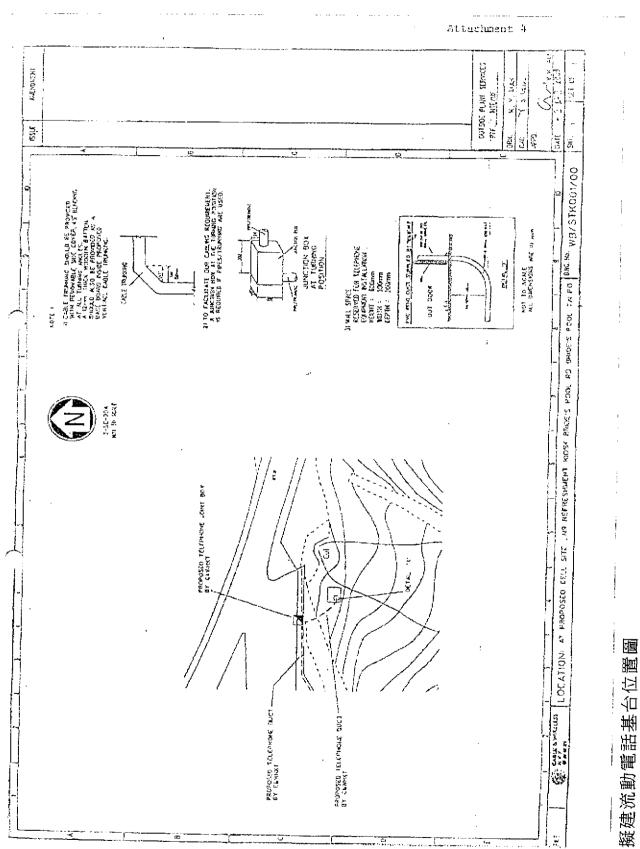
ATTACHMENT 3 附件3



設備分佈圖 擬於大埔新娘潭路安裝流動電話基台 <u>DETAIL OF EQUIPMENT SHELTER LAYOUT</u> PROPOSED TCSL SITE AT BRIDE'S POOL ROAD (TAI PO)

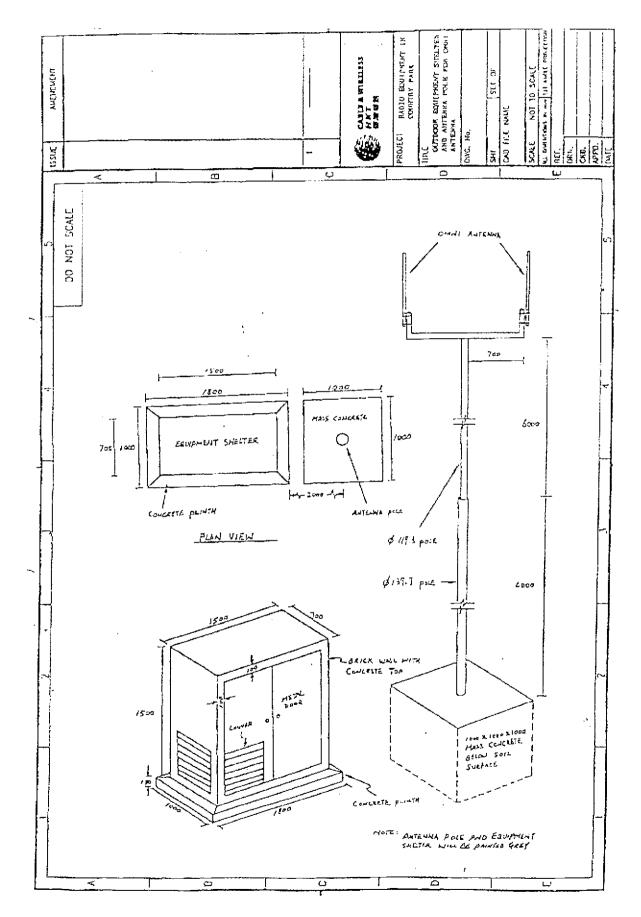
NOT TO SCALE

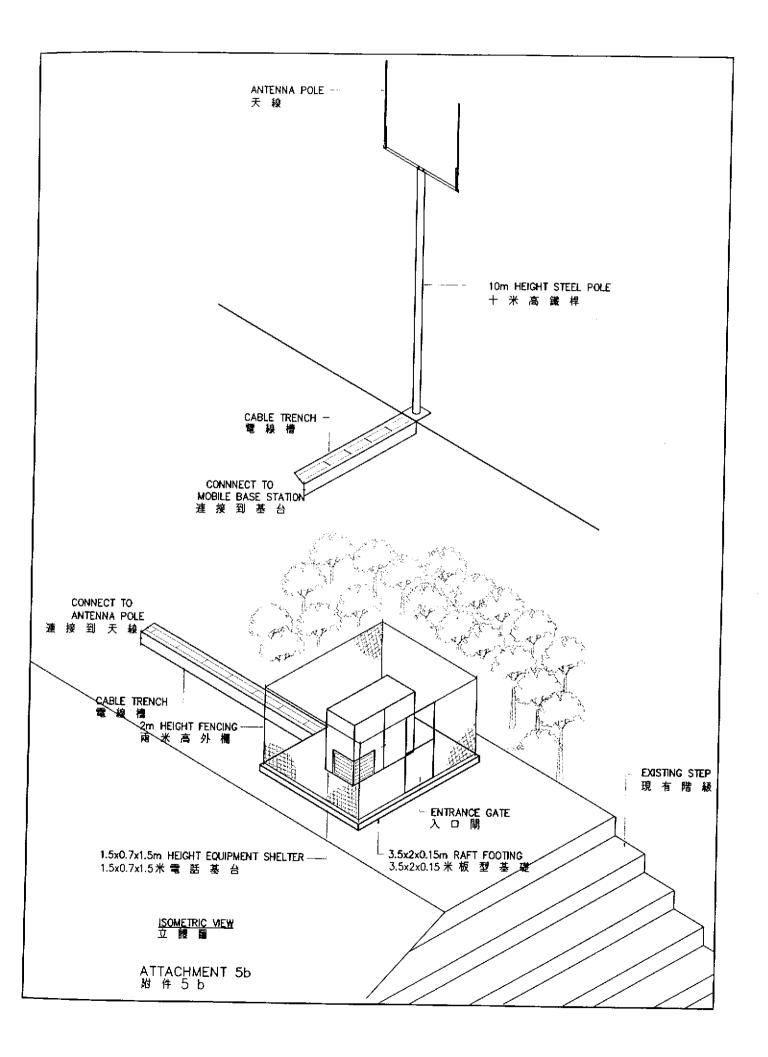
ATTACHMENT 4 附件4



电空径口







ID Task Name L / Kat Finish 2506 2007 2 Foundation wold for the alte 幾 進 工 用 0 unration Start Finish 2506 0.007 0.007 3 Teleptone fire and & electric facilies 電 波 波 皮 客 消 満 2 w worspron Finish 2506 0.007 0.007 4 Meetal fence installation % 梁 皮 男 花 得 2 w worspron Finish 2506 0.007 0.006 5 Antoma pole restallation % 梁 皮 第 第 代 2 w worspron Finish 2506 0.007 6 Equipment installation % 梁 皮 第 第 代 2 w worspron Finish 2506 0.007 7 Oorminssion test # K 1 w worspron Finish 8.0006 7 Oorminssion test # K 1 w worspron Finish 8.0006 7 Oorminssion test # K 1 w worspron Finish Relation 7 Oorminssion test # K 1 w worspron Finish E or for the ordinance 7 Oorminssion test # K 1 w worspron Finish Finish 7 Oorminssion test # K 1 w worspron Finish Finish 7 Oorminssion test # K 1 w worspron Finish Finish	Installat	ion of Radio	Base Station a INDICATIVE	ase Station at Bride's Road within Pat INDICATIVE WORKS PROGRAMME	Installation of Radio Base Station at Bride's Road within Pat Sin Leng country Park INDICATIVE WORKS PROGRAMME
ID Task Name Duration Start Finish 200 2007/10071 Finish 200 2 Foundation work for the site 進工程 2x Mon 20700 Finish 200 00071 3 Telephone line and & electric facilities 葉 搖 葉 水 電 方 嵌 電 2x Mon 20700 Finish 200 5 Meeta litence installation 葉 葉 葉 欄 兩 電 2x Mon 100700 Finish Finish 7 Meeta litence installation 葉 葉 葉 欄 兩 電 2x Mon 100700 Finish Finish 7 Meeta litence installation 葉 葉 葉 欄 兩 電 2x Mon 100700 Finish Finish 7 Commission last 割 號 第 所 Mon 100700 Finish Finish 7 Commission last 割 號 1x Mon 100700 Finish 7 Commission last 割 號 1x Mon 100700 Finish 7 Commission last 割 號 Example Finish Finish 8 Mon 20040 Finish Mon 100700 Finish 7 Commission last 割 號 Mon 100700 Finish 8 Finish Mon 100700 Finish 9 Finish Mon 100700 Finish 9 Fini Mon 1 Mon 100700 Finish			-1	工序流程表	
1 Total Working Days 集後上日第 560 Mon 180710 Fn 140401 2 Foundation work for the alle 長玉王君 2w Mon 180700 Fn 120700 3 Telephone line and & electric facilities 素 清 紫 火 電 力 振 強 2w Mon 180700 Fn 120700 5 Metal fance installation 学 装 魚 馬 二日 2w Mon 180700 Fn 120700 7 Metal fance installation 学 装 魚 馬 2w Mon 180700 Fn 140900 7 Commission test R K 2w Mon 100800 Fn 40900 7 Commission test R K 2w Mon 100800 Fn 40900 7 Commission test R K 2w Mon 100800 Fn 40900 7 Commission test R K R Zw Mon 100800 7 Commission test R K Mon 100800 Fn 40900 7 Commission test R K R Mon 100800 8 Mon 100800 Fn 40900 Fn 40900 7 Commission test R K Mon 100800 Fn 40900 7 Commission test R K Mon 100800 Fn 40900 7 Mon 200800 Fn 40900 Fn 40900 8 Mon 200800 Fn 40900 Fn 40900 8 Mon 200800 Fn 40900 Fn 40900 <	Task Name	Duration	traty		July August September 75/06 02/07 18/07 32/07 30/07 <td< th=""></td<>
	Total Working Days 44 創工日類	55d	Mon 02/07/01	5	
		ZW	Man 02/07/01	Fri 13/07/01	
	19 17	2w	Mon 16/07/01	Fri 27/07/01	
	金属周	2w	Mon 30/07/01	Fri 10/08/01	
	₩	2w	Mon 13/08/01	Fri 24/08/01	
	쏶	2w	Man 27/08/01	Fri 07/09/01	
	Commission test 웱 벐	1w	Mon 10/09/01	Fri 14/09/01	
	Task		Summary		Rolled Up Progress
Please Note: All construction periods are estimated. The duration and times may vary according to the contractor's actual programme.			Rolled Up T _i	ask	
Please Note: All construction periods are estimated. The duration and times may vary according to the contractor's actual programme.	Milestone		Rolled Up M	lilestone 🔷	
	instruction periods are estimated. The duration and time	s may vary a	ccording to the	e contractor's a	actual programme. Attachment 6 (Bit ft+ 6)

ATTACHMENT 7

RECOMMENDED POLLUTION CONTROL CLAUSES FOR CONSTRUCTION CONTRACTS

AVOIDANCE OF NUISANCE

- (i) All works are to be carried out in such a manner as to cause as little inconvenience as possible to nearby residents, property and to the public in general, and the Contractor shall be held responsible for any claims which may arise from such inconvenience.
- (ii) The Contractor shall be responsible for the adequate maintenance and clearance of channels, gullies etc. and shall also provide and maintain such pedestrian and vehicular access as shall be directed within the works site.
- (iii) Water shall be used to prevent dust rising and the Contractor shall take every precaution to prevent the excavated materials from entering into the public drainage system.
- (iv) The Contractor shall carry out the Works in such a manner as to minimize adverse impacts on the environment during execution of the Works.

NOISE POLLUTION CONTROL

General Requirements

- (i) The Contractor shall comply with and observe the Noise Control Ordinance and its subsidiary regulations in force in Hong Kong.
- (ii) The Contractor shall provide an approved integrating sound level meter to IEC 651: 1979 (Type 1) and 804 : 1985 (Type 1) and the manufacturer's recommended sound level calibrator for the exclusive use of the Engineer at all times. The Contractor shall maintain the equipment in proper working order and provide a substitute when the equipment are out of order or otherwise not available.
- (iii) The sound level meter including the sound level calibrator shall be verified by the manufacturers every two years to ensure they perform the same levels of accuracies as stated in the manufacturer's specifications. That is to say at the time of measurements, the equipment shall have been verified within the last two years.
- (iv) In addition to the requirements imposed by the Noise Control Ordinance, to control noise generated from equipment and activities for the purpose of carrying out any construction work other than percussive piling during the time period from 0700 to 1900 hours on any day not being a general holiday (including Sundays), the following requirements shall also be complied with : -
 - (a) The noise level measured at 1m from the most affected external facade of any

nearby noise sensitive receivers from the construction work alone during any 30 minute period shall not exceed an equivalent sound level (Leq) of 75 dB(A).

- (v) Before the commencement of any work, the Engineer may require the methods of working, equipment and sound-reducing measures intended to be used on the Site to be made available for inspection and approval to ensure that they are suitable for the project.
- (vi) The Contractor shall devise, arrange methods of working and carry out the Works in such a manner so as to minimise noise impacts on the surrounding environment, and shall provide experienced personnel with suitable training to ensure that these methods are implemented.
- (vii) The Contractor shall ensure that all plant and equipment to be used on Site are properly maintained in good operating condition and noisy construction activities shall be effectively sound-reduced by means of silencers, mufflers, acoustic linings or shields, acoustic sheds or screens or other means to avoid disturbance to any nearby noise sensitive receivers.
- (viii) Notwithstanding the requirements and limitations set out in clause (iv) above and subject to compliance with clauses (vi) and (vii) above, the Engineer may upon application in writing by the Contractor, allow the use of any equipment and the carrying out of any construction activities for any duration provided that he is satisfied with the application which, in his opinion, to be of absolute necessity and adequate noise insulation has been provided to the educational institutions to be affected, or of emergency nature, and not in contravention with the Noise Control Ordinance in any respect.
- (ix) The Contractor shall, when necessary, apply as soon as possible for a construction noise permit in accordance with the Noise Control (General) Regulations, display the permit as required and copy to the Engineer.

DUST SUPPRESSION MEASURES

- (i) The Contractor shall undertake at all times to prevent dust nuisance as a result of his activities. The air pollution control system installed shall be operated whenever the plant is in operation.
- (ii) The Contractor shall at his own cost, and to the satisfaction of the Engineer, install effective dust suppression equipment and take such other measures as may be necessary to ensure that at the Site boundary and any nearby sensitive receiver the concentration of air-borne dust shall not exceed 0.5 milligrams per cubic meter, at standard temperature (25^BC) and pressure (1.0 bar) averaged over one hour, and 0.26 milligrams per cubic metre, at standard temperature (25^BC) and pressure (25^BC) and pressure (1.0 bar) averaged over 0.0 bar) averaged over 24 hours.
- (iii) In the process of material handling, any material which has the potential to create dust shall be treated with water or sprayed with wetting agent.
- (iv) Where dusty materials are being discharged to vehicle from a conveying system at a fixed

transfer point, a three-sided roofed enclosure with a flexible curtain across the entry shall be provided. Exhaust should be provided for this enclosure and vented to a fabric filter system.

- (v) Any vehicle with an open load carrying area used for moving materials which have the potential to create dust shall have properly fitting side and tail boards. Materials having the potential to create dust shall not be loaded to a level higher than the side and tail boards, and shall be covered by a clean tarpaulin. The tarpaulin shall be properly secured and shall extend at least 300mm over the edges of the side and tail boards.
- (vi) Any stockpile of dusty material shall be either:
 - (a) covered entirely by impervious sheeting;
 - (b) placed in an area sheltered on the top and three sides; or
 - (c) sprayed with water or dust suppression chemical so as to maintain the entire surface wet.
- (vii) Implementation of mitigation measures under the Air Pollution Control (Construction Dust) Regulation where appropriate.
- (viii) The Contractor shall frequently clean and water the site to minimize the fugitive dust emissions.

WATER POLLUTION CONTROL

Discharge into Sewers and Drains

- (i) The Contractor shall not discharge directly or indirectly (by runoff) or cause or permit or suffer to be discharged into any public sewer, storm-water drain, channel, stream-course or sea, any effluent or foul or contaminated water or cooling or hot water without the prior consent of the relevant Authority who may require the Contractor to provide, operate and maintain at the Contractor=s own expense, within the premises or otherwise, suitable works for the treatment and disposal of such effluent or foul or contaminated or cooling or hot water.
- (ii) If any office, site canteen or toilet facilities is erected, foul water effluent shall, subject to paragraph (I) above, be directed to a foul sewer or to a sewage treatment facility.
- (iii) The Contractor=s attention is drawn to the Building Ordinance, the Water Pollution Control Ordinance and the Technical Memorandum >Standard for Effluent Discharged into Drainage and Sewerage Systems, Inland and Coastal Waters.= and ProPECC PN 1/94 AConstruction Site Drainage≅.

WASTE MANAGEMENT

General

- (i) The Contractor is responsible for waste control within the Site, removal of waste materials produced from the Works and to implement any mitigation measures to minimise waste or to redress problems from waste arising from the Works. The waste may include any sewage, waste water of effluent containing sand, cement, silt of any other suspended solid or dissolved material to flow from the Works onto any adjoining land, storm water or foul water sewer, or any waste matter or surplus material or refuse to be deposited outside the Site or to be deposited permanently anywhere within the Works. The illegal 'fly-tipping' of any wastes or surpluses which may arise from the Works is strictly prohibited.
- (ii) The overall waste management strategy to be adopted involves minimisation of the waste generation, coupled with the maximum reuse and recycling of waste, where practicable, in accordance with the general principles of the waste management hierarchy.
- (iii) Unless otherwise stated in the Contract, all Construction and Demolition (C&D) Material arising from or in connection with the Works shall become the property of the Contractor. The Contractor shall promptly remove all sorted and processed materials not suitable for inclusion in the Works.
- (iv) The Contractor shall comply with the Waste Disposal Ordinance, the Dumping at Sea Ordinance, the Public Health and Municipal Services Ordinance and the Water Pollution Control Ordinance and any other relevant legislation that may be brought into force when undertaking waste management.
- (v) The Contractor shall be responsible for obtaining the relevant license / permit, such as the effluent discharge licence, the chemical waste producer registration etc.

Removal of Waste Material

- (i) The Contractor shall not permit any sewage, waste water or effluent containing sand, cement, silt or any other suspended or dissolved material to flow from the Site onto any adjoining land or allow any waste matter or refuse to be deposited anywhere within the Site or onto any adjoining land and shall have all such matter removed from the Site.
- (ii) The Contractor shall be liable for any damages caused to adjoining land through his failure to comply with sub-clause (i).
- (iii) The Contractor shall be responsible for temporary training; diverting or conducting of open streams or drains intercepted by any works and for reinstating these to their original courses on completion of the Works.
- (iv) The Contractor shall be responsible for adequately maintaining any existing site drainage system at all times including removal of solids in sand traps, manholes and stream beds.
- (v) Any proposed stream course and nullah temporary diversions shall be submitted to the

Engineer for agreement one month prior to such diversion works being commenced. Diversions shall be constructed to allow the water flow to discharge without overflow, erosion or washout. The area through which the temporary diversion runs is to be reinstated to its original condition or as agreed by the Engineer after the permanent drainage system has been completed.

- (vi) The Contractor shall furnish, for the Engineer's information, particulars of the Contractor's arrangements for ensuring that material from any earthworks does not wash into the drainage system. If at any time such arrangements prove to be ineffective, the Contractor shall take such additional measures as the Engineer shall deem necessary and shall remove all silt which may have accumulated in the drainage system whether within the Site or not.
- (vii) The Contractor shall segregate all inert construction waste material suitable for reclamation or land formation and shall dispose of such material at such dumping areas as may be specified from time to time by the Director of Civil Engineering.
- (viii) All non-inert construction waste material deemed unsuitable for reclamation or land formation and all other waste material shall be disposed of at a public landfill.
- (ix) The Contractor's attention is drawn to the Waste Disposal Ordinance, the Public Health and Municipal Services Ordinance and the Water Pollution Control Ordinance. It shall be the Contractor's responsibility, at his own cost, to obtain all licences, permits and the like which may be necessary for compliance with the above or other ordinance.