

**Proposed Installation
Of
Mobile Base Station
At
Ling Kok Shan (832325.6E, 807311.4N)
Lamma Island
New Territories**

Project Profile

Hutchison Telephone Company Limited

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Table of Contents

	Page no.
1. Basic Information	
1.1 Project Title	1
1.2 Propose and Nature of the Project	1
1.3 Name of Project Proponent	1
1.4 Location and Scale	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	2
2. Outline of Planning and Implementation Programme	
2.1 Planning and Implementation of the Proposed Project	3
2.2 Site Selection	3
2.3 Work Schedules	3
2.4 Interactions with Broader Programme Requirements Other Projects	3
3. Major Elements of the Surrounding Environment	
3.1 Noise	4
3.2 Air Quality	4
3.3 Ecology	4
3.4 Landscape and Visual	5
4. Possible Impacts on the Environment	
4.1 Process Involved	7
4.2 Summary of Potential Environment Impacts	7
4.3 Noise	8
4.4 Liquid Effluents, Discharges, or Contaminated Runoff	8
4.5 Generation of Waste or By-products	9
4.6 Unsightly Visual Appearance	9
4.7 Ecological Impacts	9
4.8 Risk of Accidents which Result in Pollution or Hazard	11
4.9 Others	11
5. Environmental Protection Measures to be Incorporated in the Design and any Further Environmental Implications	
5.1 Measures to Minimise Environmental Impacts	12
5.2 Rural and New Town Planning Committee of the Town Planning Board Condition	13
5.3 Previously Approval Similar Environmental Assessments	13
6. Conclusion	15

List of Attachments

Attachment I Site Location Plan

Attachment II Details of Construction Works

Attachment III Letter from Planning and Lands Branch Development Bureau Government
Secretariat

Attachment IV Location Plan showing the Noise Sensitive Receivers (NSRs)

Attachment V Site Mark-up Photo

1.0 BASIC INFORMATION

1.1 Project Title

Proposed Installation of Mobile Base Station at Ling Kok Shan (832325.6E, 807311.4N), Lamma Island, New Territories.

1.2 Purpose and Nature of the Project

The project is a mobile phone base station involving mobile phone network operator Hutchison Telephone Company Limited (open for participation by other mobile operators) aimed to improve the mobile phone coverage for hikers and visitors in area around Ling Kok Shan and to ensure that tele-communications for the general public is maintained in case of emergency.

1.3 Name of Project Proponent

Hutchison Telephone Company Limited

1.4 Location and Scale of Project

The proposed Mobile Phone Base Station will be constructed at Ling Kok Shan (832325.6E, 807311.4N), Lamma Island, New Territories, and within a "Conservative Area" (CA) according to the Lamma Island Outline Zoning Plan No. S/I-LI/9. The station will comprise of an equipment platform (7.0m(L) x 5.5m(W) x 0.7m(D)) with an area of 38.5 square meters. The equipment platform, consist of six cabinets for holding electrical equipment and one 15m high transmission tower for 2G, PCN & 3G mobile networks, will be erected on the hill at level 218mPD. For receive of telephone signal from Hong Kong Island, a 600mm dia. microwave receiver on 2m high pole will also be erected at the Ling Kok Shan (832172.255E, 807354.206N) at level 238.5mPD (The location plan is shown in **Attachment I**). The pole will be erected on a small footing of 0.3m dia. x 0.5mH in size, there will be telephone conduit linking the equipment platform and the receiver. The telephone cable is about 235m in length and will be mounted above ground in a conduit, except for a small portion when it crosses under the approx. 1.2 m width of concrete pavement at the top of the hill, this arrangement would have minimum disturbance to the environment. There will be power cable linking the equipment platform and the existing power supply. The power cable about 90m in length would be installed at 760mm below the ground level. 500mm width footpath interconnecting between existing footpath and equipment platform/ microwave receiver will be proposed. It would be constructed by flat rock pieces of 500mm(L) x 300mm(W) laid on ground at 1m centre to centre, and a few concrete staircase path at steep ground only. 11 nos. rare and precious plant, *Artocarpus Hypargyreus* were found near to our site (please refer to **attachment I**), from the site inspection, the *Artocarpus Hypargyreus* looks health and in good condition, the other area is majority of wild grass area and hence our cable and path routing can be arranged to run on wild grass land, not to endanger the rare plant species.

The details of the construction works are shown in **Attachment II**.

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

Only one designated project to be covered by this project profile. The proposed project is a designated project in accordance with EIAO, Schedule 2, Part 1, Section Q1 as it involves building works in conservative area and it is not considered exempt under Section Q.1 (a) to (j). Therefore, an Environment Permit under the EIA Ordinance must be obtained prior to the commencement of construction.

1.6 Name and Telephone Number of Contact Person

The contact person for this project is Mr. W.F.MACK of Hutchison Telephone Company Limited, Telephone number 2128 6573 and facsimile number 3152 2418.

2.0 OUTLINE OF PLANNING AND IMPLEMENTATION PROGRAMME

2.1 Planning and Implementation of the Proposed Project

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

The works will be carried out by a registered Contractor.

2.2 Site Selection

We had searched for the best location for mobile base station under the following three main criteria:

- It has the altitude that can allow the mobile transmission coverage at the most distant horizon;
- It has the utility support at the nearest adjacent such as existing TV station or other existing facilities that allow the base station to provide the services to the public at the earliest convenient;
- The proposed station can provide the telecommunication coverage at Tung O Wan & Sham Wan at the eastern face of Lamma Island that is sheltered by the mountain ridge.

From the above criteria, we consider the suggested location being physically right above Sham Wan and Tung O Wan is the best location we can find in the area.

2.3 Work Schedules

The construction work including the equipment and antennas installation is proposed to commence after the approval of all relative department. The key project programme target date of the captioned site is given in Table 2.1 below.

Table 2.1 Project Time Table for the Mobile Base Stations

Task Description	Schedule
Approval from Planning Department	November 2009
Approval from Secretary of Housing, Planning and Lands Bureau	Sept 2010 to Nov 2010
Approval from Building Department	Aug 2010 to Oct 2010
Construction	Nov 2010 to Jan 2011
Launch of service	Feb 2011

2.4 Interactions with Broader Programme Requirements Other Projects

There are one planning project (Application no. DIR-145/2006) located near our proposed site which is Hill-top TV Transposer Station Expansion. However, this planning project was started and anticipated to be finished in August 2010, so they will not interact with the construction programme of this project. As such, cumulative environmental impacts would not result.

3.0 MAJOR ELEMENTS OF THE SURROUNDING ENVIRONMENT

3.1 Noise

The proposed mobile base station will be located in remote hilltop locations and there are no noise sensitive receivers (NSRs) identified within 300m from the site boundary. The separation distance of the nearest NSRs from the works area are over 440m (at Village Houses at Ta Shui Wan). The location plan is attached in **Attachment IV**

3.2 Air Quality

The existing air sensitive receivers (ASRs) at Village Houses at Ta Shui Wan, which is 440m far from the works area, therefore, not expected to be affected. Also, hikers in the country parks will only be subject to negligible nuisances.

3.3 Ecology

The proposed antenna tower is small in scale (1.5m by 1.5m on plan and 15m high from ground) at a side ridge of the Ling Kok Shan at the South of Lamma Island (level about 217 mPD, 832325.6E, 807311.4N). At the southern part of Lamma Island, there are two locations known to have Habitat of rare species; 1) The South Lamma Island SSSI is inhabited by bird populations of unusual species (AFCD). The area is not close to our site (which is approximately 1.4km away), and our proposed installation is located near the hilltop which is windy with no tree field and observed no bird nest or any sign of habitation by the bird; 2) The Sham Wan beach is not close to our proposed site of antenna tower and is about 1.3km from the south of the proposed antenna tower. The beach is noted to be the only regular nesting site of green turtles in Hong Kong and is of high ecology value. As we have no effluence from the proposed work which would flow down the hill to affect the beach, we consider our proposed work would have no adverse effect to the environment of the Sham Wan Beach. In addition to the above two areas of ecology concern, it is noted to exist plants of a rare plant species, *Artocarpus Hypargyreus*, around the area. A vegetation survey was conducted on 18 June 2010. The vegetation survey had cover our proposed installation (include transmission tower & microwave) and the routing of proposed footpaths, telephone conduits and power cable.

During the vegetation survey it was noted that the site (the equipment platform, the microwave receiver, new footpath and routing of telephone & power cable) and surrounding areas have habitats mainly of grassy scrub intermixed with exposed rocky boulders along the edge of a ridge. All are common habitats in Hong Kong. The site lies on a moderate slope colonised by grassy scrub.

At the area within the proposed base for the radio station (equipment platform) and the proposed temporary working area (2m from the edge of the equipment platform), there is *Rhodomyrtus tomentosa*, *Rhaphiolepis indica*, *Metastoma sanguineum* & *Clerodendrum inerme* observed which are common species only (Please refer to **Appendix V**). There were no literature recorded fauna species of conservation interest identified for this site.

At the location of the microwave receiver pole (2m high with 0.3m dia. footing), Three numbers of precious plants, *Artocarpus Hypargyreus* were found at the route from the existing footpath to the proposed small microwave antenna pole. The plants were about

1.5m, 3.7m and 6.7m respectively from the existing footpath, The minimum distance from the stem of plant to the route is 1m. There is no rare plant species at the microwave area which consists of scrubs of common species such as the *Metastoma sanguineum*. Since within the above route, we have proposed only one number of telephone conduit (diameter 127mm) laying on ground and the proposed new service footpath is made up of flat rock pieces of 500mmL x 300mmW laid on ground at 1m centre to centre, there is no excavation work near the precious plants. We consider the work would not harm the plants.

Along the routing of proposed footpaths, telephone conduits and power cable linked from the antenna transmission tower to the top of hill, except a few rare plants, *Artocarpus Hypargyreus*, that were found near the route, the area is mainly of wild grass scrub of common species. To avoid affecting the *Artocarpus Hypargyreus* near the antenna transmission tower, the routing has been slightly adjusted locally. The edge distance between our proposed routing and the crown of the *Artocarpus Hypargyreus* is at least 1.5m to avoid affecting these rare plants.

Therefore, the plant near the proposed installation (including mobile base station, microwave, routing of telephone G.I. conduit and power cable, footpath) is mostly grassy scrub and no tree felling is necessary in this project. A detailed survey would be conducted by us to identify any plant species of conservation interest at the vicinity of the sites and the path and implementation of the mitigation measures before the construction will be commenced. This is part of the approval condition of Town Planning Board

3.4 Landscape and Visual

The main visual sensitive receivers in the area are located to the north at So Kwu Wan. The peak is not a prominent landscape feature in the local area as it is mainly visible from certain parts of the Island. It cannot be seen from So Kwu Wan Village. The relative impact on the visual landscape of this station is small due to its small scale in the landscape.

3.4.1 Landscape Sensitivity

An initial assessment of the landscape sensitivity was conducted for the landscape areas within 500m of each station as per the guidelines in the EIAO Guidance Notes No. 8/2002.

In all cases the existing area covers the peak of a prominent hill, on top of which, the existing transposer station facilities is located. While the local landscape is mostly natural, the presence of these structures will reduce the landscapes sensitivity. The landscape sensitivity for each site has been classified as MEDIUM.

3.4.2 Visual Sensitivity

An initial assessment of the visual sensitivity was conducted for sensitive receivers in accordance with the guidelines in the EIAO Guidance Note No. 8/2002. In this case sensitive receivers are residents with direct views of the sites from their home and the hikers/ visitors at the hiking trail and passengers/ people in ferries.

However, for the proposed site at Ling Kok Shan, views from the main residential area, Sok Kwu Wan, will mostly be blocked by the brow of the hillside, and the proposed antenna transmission tower is located near the existing TV tower which is

more prominent structure and hence can reduce the affect of visual sensitivity of the proposed transmission tower. Thus sensitivity for this antenna tower proposal is considered LOW.

4.0 POSSIBLE IMPACTS ON THE ENVIRONMENT

4.1 Process Involved

The Station base will be traditional reinforced concrete raft with all concrete works cast in-situ. The antenna tower will be made of galvanized mild steel members and will be prefabricated members to be bolt connected on site.

Raft Foundation will be proposed for the station building as the structure is not large and massive.

No haul road will be formed for the construction and operation of the project. Helicopter will be used for delivery of construction materials and equipments.

A small-sized excavator will be arranged for the site formation works and excavation works as the excavation work is mainly to excavate the raft of size 7m x 5m x 0.5m depth, the excavation work will be completed within two days. The excavation work will only start when the forecast weather for the coming week is good. During the excavation work, the exposed base soil surface will be covered by canvas sheeting to avoid the dusting and the drain away of soil due to surface water.

For the routing of new telecom cable (interconnecting to the stations), those will be housed by 5 inch diameter steel pipe conduit key to ground by steel studs running on surface, therefore no excavation work (except when crossing the existing footpath) will be required to minimum the impact to the environment.

For the routing of the power cable (4nos. of 150mm diameter cable entry duct) interconnecting to the transmission tower and the existing underground power cable. The power cable would be installed at depth 760mm below the ground level; therefore, the excavation work is necessary. However, as the routing of cable is of wild grass in nature, the landscape disturbance will be re-covered quickly by the grow of the wild grass at the backfilled area.

Also, it will propose 1 number 500mm width footpath, interconnecting between existing footpath and equipment platform/ microwave receiver. The new footpath is proposed to be flat rock of 500mm(L) x 300mm(W) at 1000c/c rest on the existing ground surface, no excavation work will be required to minimum the impact to the environment. There is gap in between the rock pieces; therefore the flow of surface water will not be affected.

The routing of the conduit will not impinge on any natural stream course; the installation method would have voids underneath the conduit and allows water to go, therefore the installation would not impeditment the proper flow of inland waters (Detail refer to **attachment II**)

4.2 Summary of Potential Environmental Impacts

The construction and operational impacts associated with the mobile base stations are summarised in Table 4.1 below and described in details in the following sections:

Potential Impact	
- Odour	X
- Noise	X
- Liquid Effluents, Discharges, or Contaminated Runoff	X
- Generation of Waste or By-products	X
- Disruption of Water Movement or Bottom Sediment	X
- Unsightly Visual Appearance	✓
- Ecological Impacts	
- Terrestrial	X
- Marine	X
- Fisheries	X
- Risk of Accidents which Result in Pollution or Hazard	X
- Gaseous Emissions	X
- Dust	X
- Night-time Operations	X
- Traffic Generation	X
- Manufacturing, Storage, Use, Handling, Transport, or Disposal of Dangerous Goods	X
- Hazardous Materials or Washers	X

Notes: ✓ = Potential to result in impacts, X = Not expected to result in adverse impacts

4.3 Noise

Noise Sensitive Receivers (NSRs) are not closed to the Project Works Sites and the site works are expected to be small in scale. Thus noise generated during the construction works are not expected to result in impacts to NSRs. The nearest Noise Sensitive Receivers (NSRs) is Village Houses at Ta Shui Wan, which is located over 440m from the Project Works.

Apart from the usual noise sources due to construction equipment, the key source of noise can be attributed to helicopters engaged in material delivery to the sites during the construction phase. As all Noise Sensitive Receivers (NSRs) are remote from the works site and the helicopter will be flying at high altitude, noise is not expected to be a concern.

There is no noise generated by the daily operation of the proposed mobile base station.

4.4 Liquid Effluents, Discharges, or Contaminated Runoff

During construction phase, measures will be undertaken to avoid untreated site discharges from inadvertently entering stream courses, including the implementation of temporary site drainage measures to control runoffs from the site in according with the ProPECC Note PN 1/94 "Construction Site Drainage". Actually, these would not be any major activity for this project for liquid effluents, and only a few workers are required for this work. Constructor will be required to provide chemical toilets on-site with no kitchen or canteen allowed.

Moreover, there will be no effluent discharge during the operation of the mobile base station and no water quality impacts are expected.

Based on the above, water quality impacts would be insignificant.

4.5 Generation of Waste or By-products

During construction phase, only a small amount of construction and demolition (C&D) materials such as timber formwork, general refuse etc. will be generated during construction of the mobile base station. The excavated soil will be backfilled after laying of cable. As this design is mainly pre-fabricated members to be bolted on site, very small amount of waste will be expected. Disposal of the non-inert portion of C&D materials will be removed by helicopter.

Only very small quantities of chemical waste will be generated along with municipal waste from construction works. Correct handling, storage and removal of this waste will be undertaken and adverse impacts on the environment are not anticipated. The remains will be removed by site people or by helicopter.

During operation phase, the mobile base station will be unmanned with no waste generation expected during the operation. Debris that may be generated from the annual maintenance works, such as general building maintenance, footpath repair & grass cutting, they will be removed by contractors directly upon completion of works and disposed of properly. No environmental issues are anticipated.

4.6 Unightly Visual Appearance

The new transmission tower will rise to a height of approximately 15m on the hill at level 218mPD. At the request of the Government Flying Services as to enhance flight safety, the upper part of transmission tower (4m app.) would be painted in alternating contrasting bands in red and white. After further liaison with Town Planning/ Urban Design and Landscape, Planning Department, and Agriculture, Fisheries and Conservation Department, the colour of the other part of transmission tower would follow the colour of the existing transmission tower of TVB at the uphill which is grey in colour, to minimize the incompatibility of the proposed installation to the rural landscape.

The new mobile base station structure will be visible from limited parts of the Island and is not expected to be visible from So Kwu Wan. The distance from the sensitive receivers will further reduce the dominance of this new structure. The hiking trail at Ling Kok Shan is at about 90m from the proposed installation. As we have located our tower in the region near TVB tower which is more prominent in size, the visual impact is minimized. Thus, the magnitude of visual changes is considered to slight.

4.7 Ecological Impacts

The site boundary and work sites have been minimised. The permanent loss of habitats of the proposed mobile base station should be 38.5 square meters and is limited when compared to the available habitat in the surrounding areas. The mounting of the receiver will only affect a ground area of 0.07 square meters for permanent loss of habitats. The mounting of the telephone G.I. conduit on surface is by small bars stick into ground at intervals only and would not affect terrestrial habitat and the plants along its proposed route which is of wild grass or bare land only; there is no significant permanent loss of habitats for the installation. For a very conservative approach, assuming whole length & width of the

conduit and footpath, the permanent loss due to the conduit and footpath are about 113.8 square meters and the area is limited compared to the available habitat in the surrounding area. The total permanent loss of habitats area is 172.3m². For the rare species *Artocarpus Hypargyreus* identified and located in our survey, the captioned is not within the tower area or the proposed cable routing and pavement area, it should be noted that we purposely aligned the pavement and cable routing to be on wild grass area only, affect to the rare species is negligible. Since the minimum distance between our proposed installation works (included microwave receivers and the footpath) and the rare plants, *Artocarpus Hypargyreus* is at least 1m, therefore the direct and indirect impact on the *Artocarpus Hypargyreus* is consider as LOW.

With regard to habitats in the temporary works areas (1m from the edge of the equipment platform & 0.15m from the edge of pole footing, and minimum disturbance due to mounting of conduit say 20 square meters standing area during placing of anchor), total temporary works area is about 50 square meters. As these habitats are generally young plant and easy to recreate, medium to long-term impacts are not expected. Most of the construction materials and wastes can be/will be re-used on-site without surplus materials. Any debris left will be removed upon completion of the construction works with the ground re-instated to what was before. No rare or protected fauna species have been identified at the site, rare plant species close to this site or site working area are identified and protected before site work start.

There will be some disturbance to local wildlife at the Lamma Island, as materials will need to be transported by helicopter and there will be some noise from the helicopter during its operation, but the duration would not be long. Such disturbance would be temporary with no long-term impacts expected.

Before the construction work, the steel fence round the *Artocarpus hypargyrea* will be constructed, to protect the tree from any damage, the steel fence will be in green colour to reduce its visual impact.

The proposed installation is operated by electric and uses the antenna feeder to transfer the signal from the equipment to the antenna panel; therefore, we consider not any operational impact is expected from this proposed installation.

As the sites are small and located near the top of hills, limited amount of soil stockpiling is expected to be required. In addition, there are no streams near by and it is expected that most sediments if washed from the site would be filtered out in the surrounding grass and scrub before reaching any watercourses. Measures will be implemented to control runoff such as using tarpaulin sheets to cover stockpiles and have them bonded. Impacts from run-offs are therefore expected to be minimal and of LOW significance. At the southern part of Lamma Island, there are two locations known to have Habitat of rare species; 1) The South Lamma Island SSSI is inhabited by bird populations of unusual species (AFCD). The area is not close to our site (which is approximately 1.4km away), and our proposed installation is located near the hilltop which is windy with no tree field and observed no bird nest or any sign of habitation by the bird; 2) The Sham Wan beach is about 1.3km from the south of the proposed antenna tower. The beach is noted to be the only regular nesting site of green turtles in Hong Kong and is of high ecology value. As surface water run-off from site is low, no effluent or debris would be expected to reach the beach from our construction site at hill top. Both areas are not close to our proposed site of antenna tower. In addition to the above two areas of ecology concern, it is noted to exist plants of a rare plant species, *Artocarpus Hypargyreus*, around the area. A vegetation survey was conducted on 18 June

2010. Rare plant species were identified and the immigration measures such as steel fence, and re-alignment of cable route to be used for plant protection as previously described. Disturb to Sham Wan Beach and to the South Lamma Island SSSI is not expected.

4.8 Risk of Accidents which Result in Pollution or Hazard

The operation of the proposed Mobile Base Station will strictly comply with the code "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 is at least 15 meters above ground. In this case, the non-ionizing radiation has no significant impact on the public. For the microwave receiver on 2m high pole, there is no non-ionizing radiation problem.

4.9 Others

4.9.1 Odour

No odour impacts are expected to occur as a result of this project.

4.9.2 Disruption of Water Movement or Bottom Sediment

By nature of the project, it will not result in any impact on water movement or bottom sediment.

4.9.3 Gaseous Emissions & Dust

Only a small quantity of gaseous emissions (SO₂ and NO_x) from the equipment would be generated during construction. These emissions will not impact Air Sensitive Receivers (ASRs). The site was considered as small scale and there is no major excavation work around this area. Limited amount of soil stockpiling is expected but will be covered by tarpaulin sheets and have them bonded to ground. Therefore generation of dust would be within acceptable limit

4.9.4 Night-time Operations

It is expected that all construction works will be performed during normal working hours only.

4.9.5 Traffic Generation

There is no vehicular access to the site of this project.

4.9.6 Manufacturing, Storage, Use, Handling, Transport, or Disposal of Dangerous Goods

No dangerous goods will be involved in this Project.

4.9.7 Hazardous Materials or Washers

No Hazardous Materials or Washers will be generated by this Project.

5.0 ENVIRONMENTAL PROTECTION MEASURES TO BE INCORPORATED IN THE DESIGN AND ANY FURTHER ENVIRONMENTAL IMPLICATIONS

5.1 Measures to Minimise Environmental Impacts

1) Ecology

- a) The affected area of this project is small and a field survey was conducted for this area. To minimize the environmental impacts, most of the superstructure is pre-fabricated off-site and joint together on site, the cable connecting the station will be housed in a steel pipe mounted on the ground such as to minimize any possible disturbance to ground and generation of soil debris that may be carried down by surface water. The routing of conduit was designed to run through bare land or grass land only and would not be at area of rare species and would not impinge any natural streams or impediment to the proper flow of any inland waters.
- b) In particular, design of the tower has not used guy wires, which can increase collision rates of birds. During foggy or cloudy weather, illumination of the tower at night could attract migrating birds passing by towards the tower resulting in collision. From the angle of aviation safety, an intermittent light/strobe system with a minimum intensity of 10 candelas would be installed at the four sides and highest point of the transmission tower which had been submitted in S16 of Town Planning Board.
- c) To protect the 11 nos. of rare plant *Artocarpus Hypargyreus* as mentioned in Section 3.3 being affected, before construction work begins, a steel fence will be constructed round the plants with 1m gap between the crown and the edge of the fence (where appropriate) to protect the tree from any damage. On completed of works all fences will be removed. Also, the alignment of the footpath, routing of telephone G.I. conduit & power cable would be fine-tuning when this proposed installation very close to the rare plant/ plant species of conservation interest.
- d) All disturbed temporary works area shall be restored to their original soil and habitat conditions after completion of works. Good site practice under the supervision of competent person should also be adopted to minimize disturbance to the natural environment during the work.

2) Landscape and Visual –

- a) The works areas will be kept tidy and construction wastes will be properly managed to reduce the visual impact to a minimum.
- b) The site area will be reinstated after works have been completed and shall be replanted with native species appropriate to this area and soil type to enhance the habitat of the area.
- c) The proposed telephone cable running in conduit on ground surface would be painted in grey colour to minimize the visual impact. The upper part of transmission tower would be painted in alternating contrasting bands in red and white. The colour of the other part of transmission tower would follow the

colour of the existing transmission tower of TVB at the uphill which is grey in colour, to minimize the incompatibility of the proposed installation to the rural landscape. The original equipment shelter was also revised to small cabinets and with the use of small size members,

- 3) Noise Quality – The Contractor shall comply with and observe the Noise Control Ordinance and its subsidiary regulations in force in Hong Kong.
- 4) Air Quality – The Contractor shall comply with Air Pollution Control (Construction) Dust) Regulations.
- 5) Water Quality – The contractor will be obliged to fully comply with the Water Pollution Control Ordinance and during construction works and follow the best practice site drainage measures as described in the ProPECC Note PN 1/94 “Construction Site Drainage”. During construction all excavated soil materials will be properly covered and protected to ensure that surface runoff will not result.
- 6) Waste – As for this small scale project, C&D waste can be/will be re-used on-site without surplus materials. The very small quantity of remain waste will be removed off site. No trip-ticket system will be required or applicable in this case.

5.2 Rural and New Town planning Committee of the Town Planning Board condition

This proposed development is approved under s.16 application No. A/I-LI/13 by the Rural and New Town Planning Committee (RNTPC) of the Town Planning Board (the Board) on 6.11.2009 with the following conditions for us to comply with:

- (a) The submission of a vegetation survey and implementation of the mitigation measures identified therein to the satisfaction of the Director of Agriculture, Fisheries and Conservation or of the Board;
- (b) the submission and implementation of visual impact mitigation measures to the satisfaction of the Director of Planning or of the Board;
- (c) the submission and implementation of landscaping proposal to the satisfaction of the Director of Planning or of the Board;
- (d) the submission and implementation of the maintenance footpaths to the satisfaction of the Director of Planning or of the Board; and
- (e) the restoration of the disturbed areas after completion of the proposed works to the satisfaction of the Director of Planning or of the Board.

5.3 Previously Approved Similar Environmental Assessments

References have been made to the following Project Profiles submitted for Applications for Permission to Apply Directly for an Environmental Permit:

- 1) Proposed Installation of Integrated Mobile Phone Base Station at Shek Pik Fire

Lookout, Lantau Island, N.T. (Application no. DIR 152/2007)

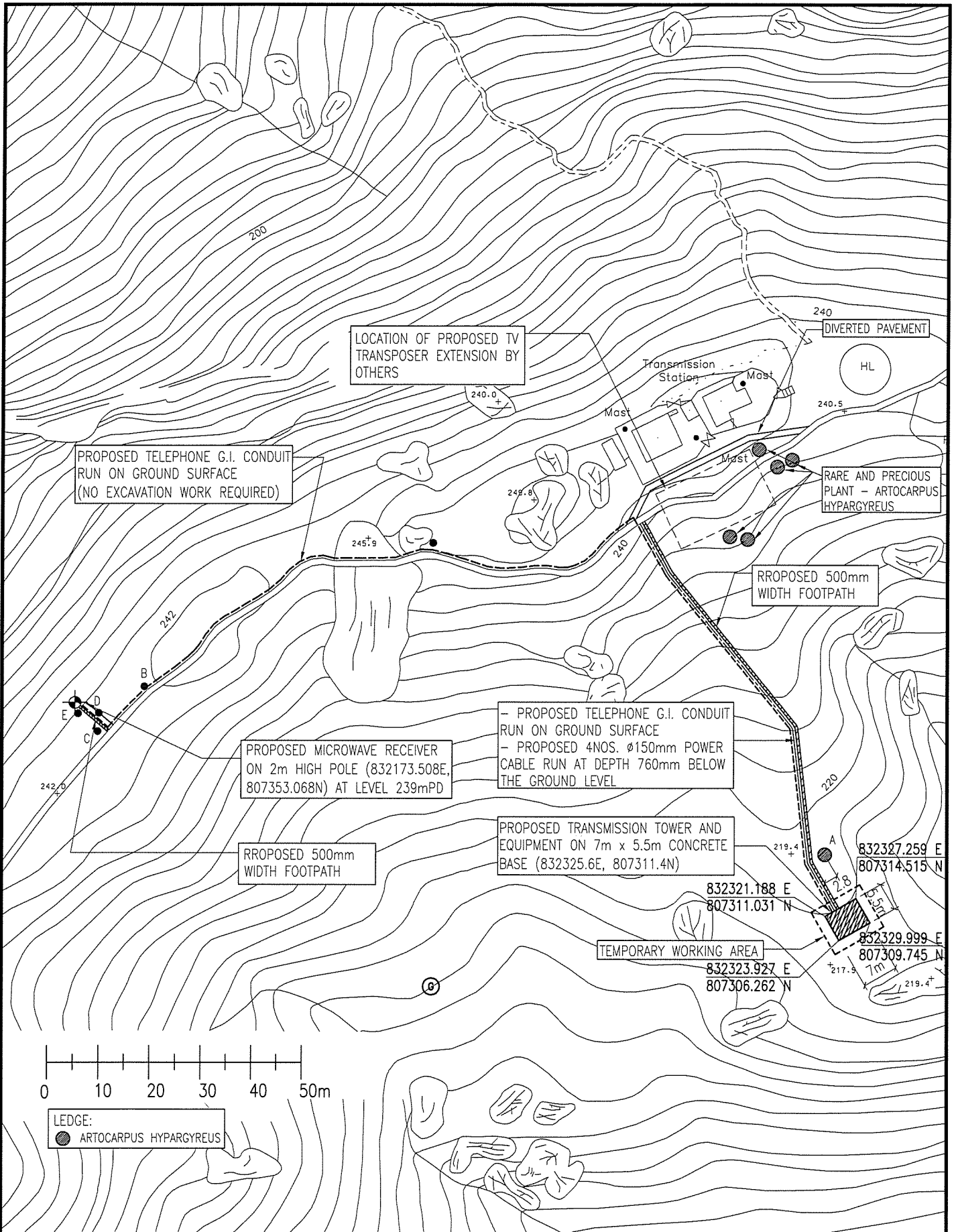
- 2) Proposed Installation of Integrated Mobile Phone Base Station at Tai Long Au, Sai Kung East Country Park, Tai Po, N.T. (Application no. DIR 151/2007)
- 3) Proposed Installation of Integrated Mobile Phone Base Station at South Lantau Island Country Park, Man Cheung Po, Tai O, Hong Kong (Application no. DIR 148/2007)
- 4) Hill-top Transposer Station Expansion at Castle Peak, Kowloon Peak, Cloudy Hill and Lamma Island (Application no. DIR 145/2006)
- 5) Proposed Installation of Integrated Mobile Phone Base Station at Pat Sin Leng Country Park Chung Pui, Tai Po (Application no. DIR 144/2006)
- 6) Proposed Installation of Integrated Mobile Phone Base Station at Twisk Management Centre within Tai Lam Country Park, Tsuen Wan. (Application no. DIR 111/2004)
- 7) Proposed Installation of Integrated Mobile Phone Base Station at Yuen Ng Fan, Sai Kung East Country Park (Application no. DIR 110/2004)
- 8) Erection of a Temporary Wind Monitoring Station at Miu Tsai Tun (Application no. DIR 104/2004)

6.0 CONCLUSION

The environmental impacts expected from the mobile base station are considered to be minor. With the implementation of the recommended mitigation measures, no adverse residual environmental impacts are anticipated.

As impacts are not expected to be adverse and with the mitigation measures proposed, the requirements of the Technical Memorandum on Environmental Impact Assessment Process will be achieved and complied with full. As such, Hutchison is applying directly for an Environmental Permit under Section 5(11) of the EIAO.

Attachment I Site Location Plan



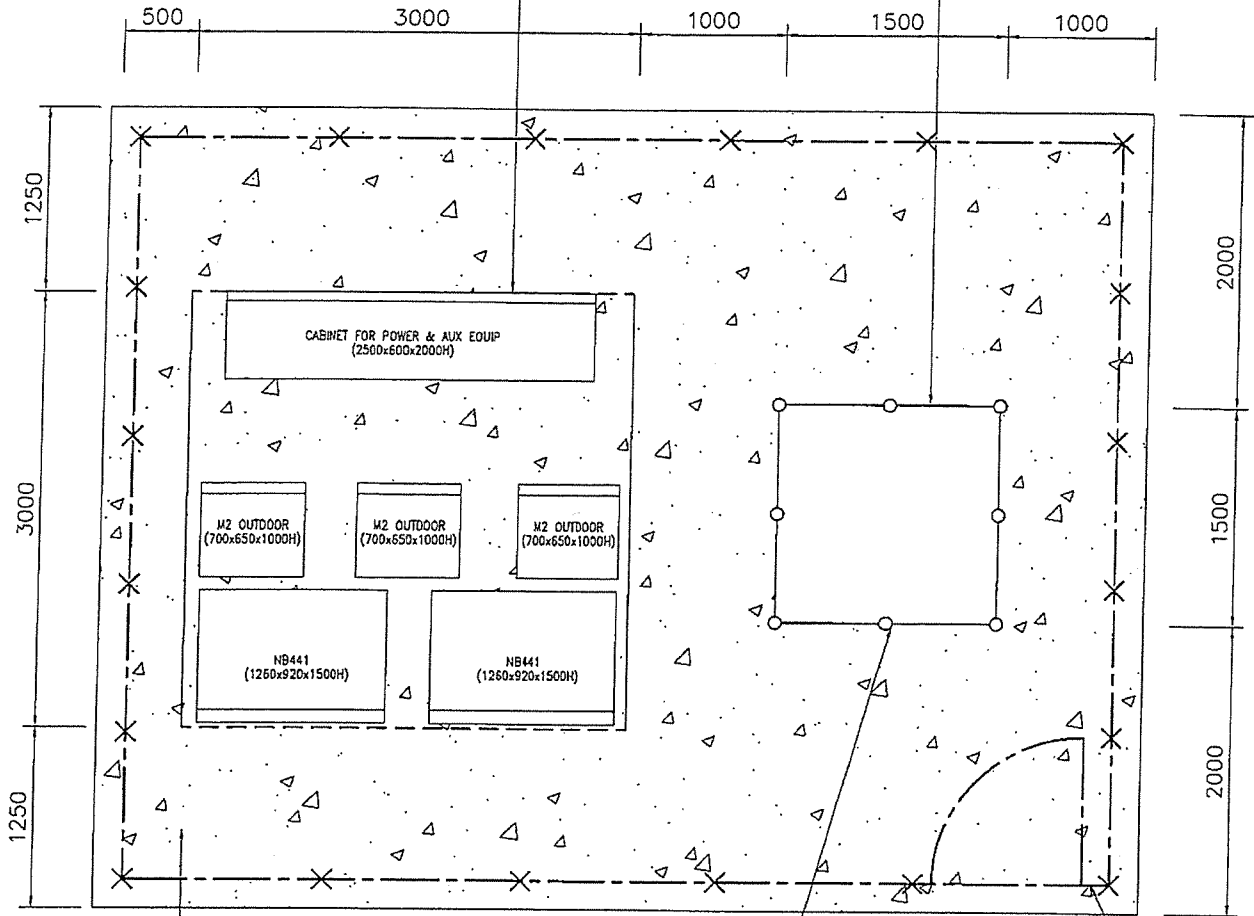
WSP HONG KONG LTD.

PROJECT	MOBILE BASE STATION AT LING KOK SHAN, LAMMA ISLAND	Drawn by	ST	Job No.	1812-073
		Checked	SS	Date	06/09
TITLE	LOCATION PLAN	Scale	1:1000 @A4	Dwg. no.	SK-SQ01

Attachment II Details of Construction Works

3mx3m AREA FOR INSTALLATION
OF OUTDOOR RADIO EQUIPMENT

PROPOSED 15m HIGH
TRANSMISSION TOWER



7.0mx5.5mx0.7m THK.
R.C. FOOTING

8 NOS. $\varnothing 88.9 \times$
6.3mm THK. CHS

2500mm HEIGHT GMS
CHAIN LINK FENCE

GENERAL LAYOUT PLAN (PAINTED WITH GREEN
COLOUR OR SIMILAR
COLOUR TO MATCH
THE SURROUNDINGS)
1 : 50

GENERAL NOTES :

- ALL DIMENSIONS TO BE IN mm.
- ALL STRUCTURAL STEEL TO BE GRADE 275 TO BS EN10025
- BOLTS AND NUTS SHALL BE OF STAINLESS STEEL GRADE A1-50 TO BS EN3506-1:1998 & BS EN1011-2:2001, UNLESS OTHERWISE STATED. BOLTS SHALL BE INSTALLED IN CLEARANCE HOLE WITH EPOXY GROUT OF STRENGTH > 30 Mpa.
- ALL STRUCTURAL STEELWORKS SHALL BE HOT-DIP GALVANIZED TO A COATING OF 85 MICRONS THICK. TWO COATS OF ZINC RICH PRIMER SHALL BE APPLIED TO ALL STRUCTURAL STEELWORK EXCEPT ANTENNA POLES AND BRACKETS.
- ALL WELD TO BE 4 mm FILLET WELD ALL ROUND EXCEPT OTHERWISE SHOWN.
- ALL WELDING SHALL BE CARRIED OUT BY QUALIFIED WELDER AND COMPLIED WITH BSEN 1011 PART 1:1998 & PART 2:2001. THE WELD SHALL BE TESTED IN ACCORDANCE WITH BSEN 1714:1998. THE WELDING PROCEDURES AND WELDERS SHALL BE TESTED IN ACCORDANCE WITH BSEN ISO 15614 PART 1:2004 & PART 8:2002, BS4871 AND BS4872.
- AFTER FABRICATION, ERECTION AND EXAMINATION OF THE STRUCTURAL THE STRUCTURAL ELEMENTS, NON-DESTRUCTIVE TESTS ON A REPRESENTATIVE NUMBER OF WELDED JOINTS SHOULD BE CARRIED WITH SAMPLING RATE OF NOT LESS THAN 10% OF THE TOTAL NUMBER OF WELDED JOINTS. THE JOINTS TO BE TESTED SHOULD BE DETERMINED BY DETERMINED BY THE ENGINEER ON SITE.
- DETAILS AND LOCATIONS OF SPLICING JOINTS TO BE PROPOSED BY CONTRACTOR AND TO BE APPROVED BY THE ENGINEER.
- DIMENSIONS ASSOCIATING WITH EXISTING STRUCTURE TO BE VERIFIED ON SITE. ANY DISCREPANCIES FOUND SHOULD BE REPORTED TO THE ENGINEER PRIOR TO THE COMMENCEMENT OF WORK.
- DESIGN LIVE LOAD FOR EQUIPMENT DECK :
IMPOSED LOAD = 5 KPa.



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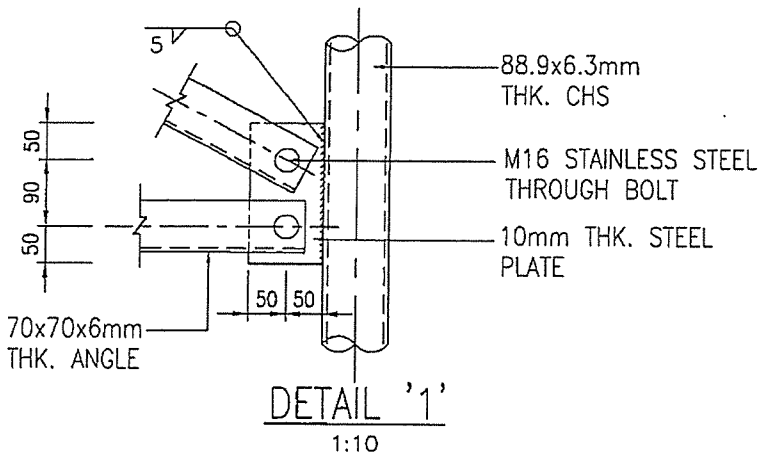
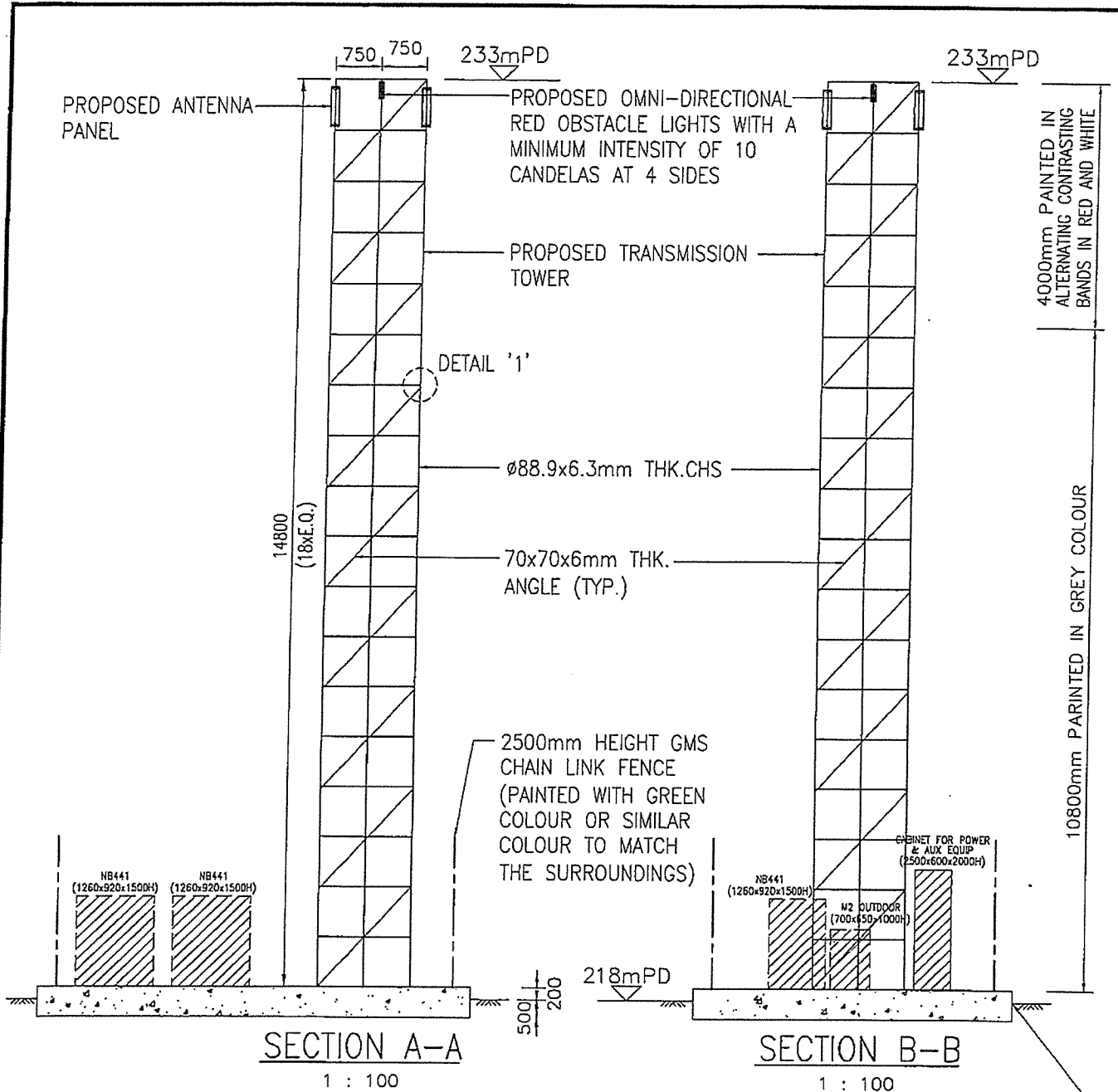
PROJECT MOBILE BASE STATION AT LING KOK SHAN, LAMMA ISLAND

Drawn by ST Job No. 1648-063

Checked SS Date 06/09

TITLE GENERAL LAYOUT PLAN

Scale AS SHOWN Dwg. no. TCHK-SK01

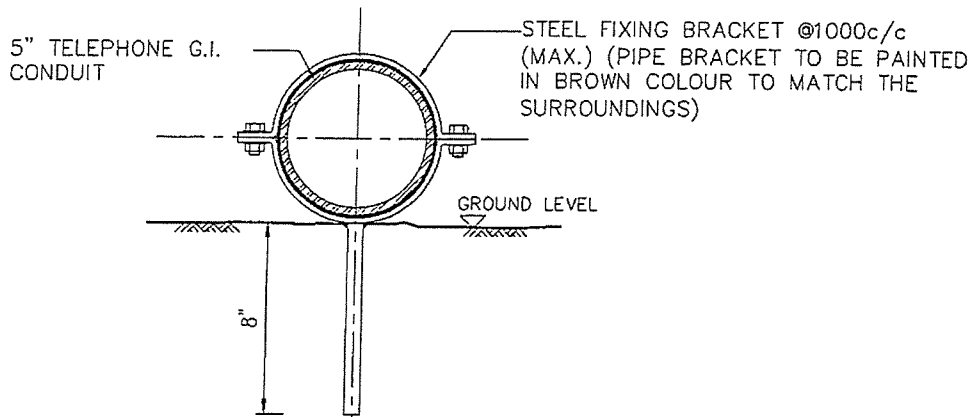


PROPOSED CONCRETE BASE ON 75mm THICK BLINDING LAYER & 300mm THK. COMPACTED HARECORE ON TOP OF COMPACTED SOIL

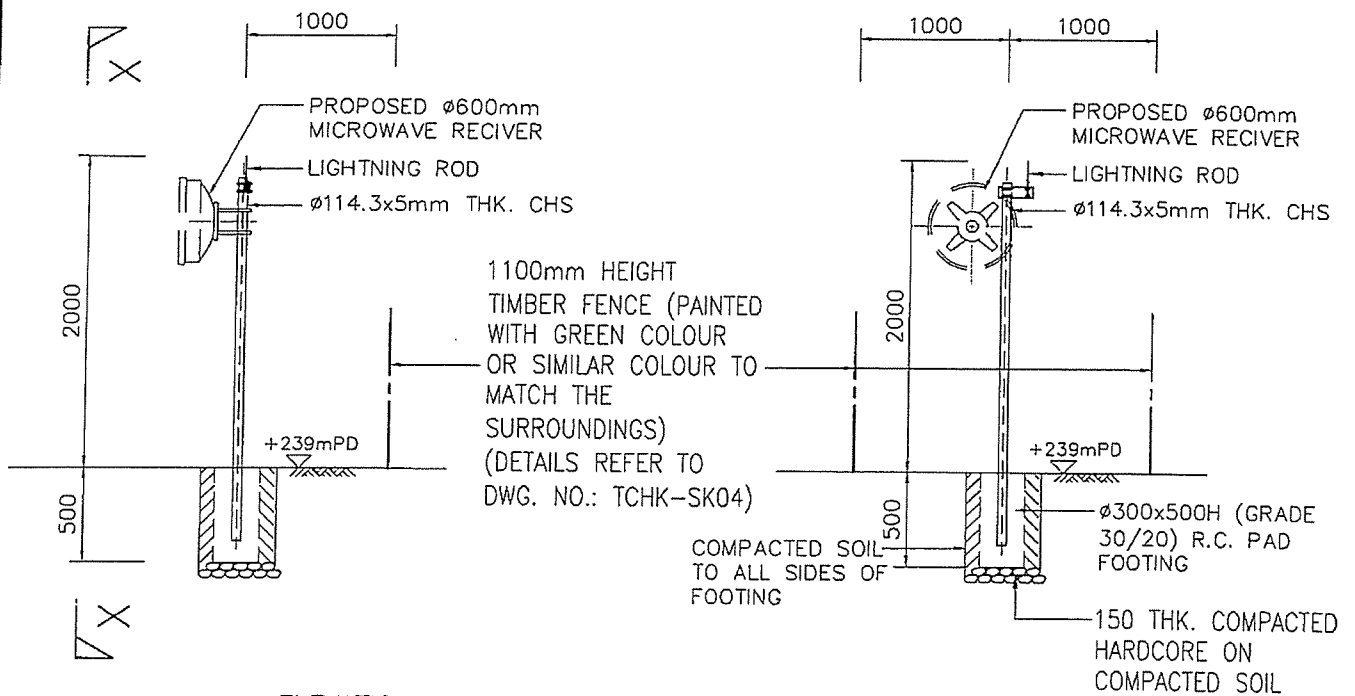


WSP HONG KONG LTD.

PROJECT	MOBILE BASE STATION AT LING KOK SHAN, LAMMA ISLAND	Drawn by	ST	Job No.	1648-063
		Checked	SS	Date	06/09
TITLE	STRUCTURAL DETAIL	Scale	Dwg. no.	TCHK-SK02	
		AS SHOWN			



TYPICAL MOUNTING FOR TELEPHONE G.I. CONDUIT



ELEVATION

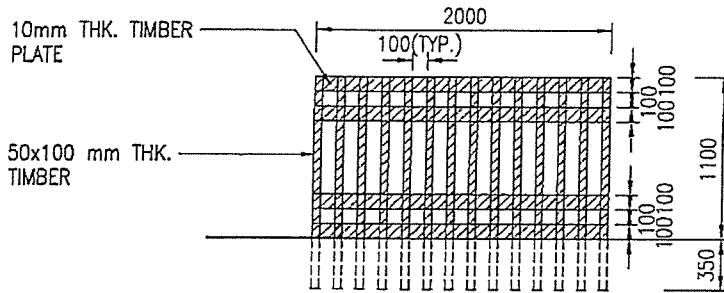
SECTION X-X

MOUNTING DETAIL FOR MICROWAVE RECEIVER

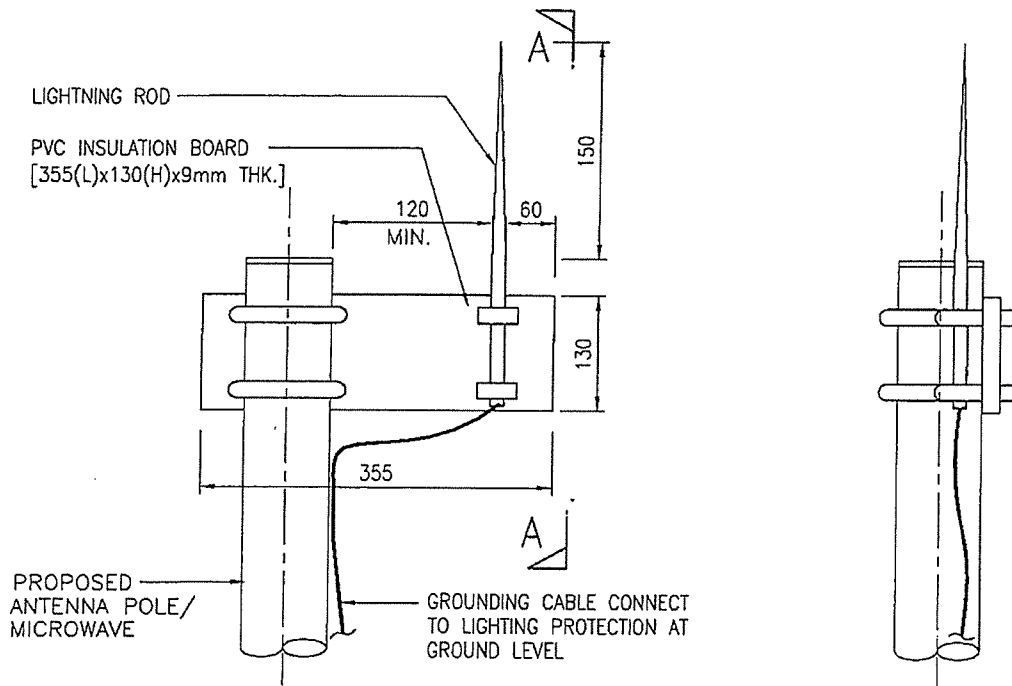


WSP HONG KONG LTD.

PROJECT	MOBILE BASE STATION AT LING KOK SHAN, LAMMA ISLAND	Drawn by	ST	Job No.	1648-063
		Checked	SS	Date	10/09
TITLE	STRUCTURAL DETAIL	Scale	AS SHOWN	Dwg. no.	TCHK-SK03



TYPICAL DETAIL OF TIMBER FENCE FOR MICROWAVE



ELEVATION

SECTION A-A

TYPICAL MOUNTING DETAIL OF LIGHTNING PROTECTION FOR ANTENNA POLE/ MICROWAVE



PROJECT	MOBILE BASE STATION AT LING KOK SHAN, LAMMA ISLAND	Drawn by	ST	Job No.	1648-063
		Checked	SS	Date	10/09
TITLE	STRUCTURAL DETAIL	Scale	AS SHOWN	Dwg. no.	TCHK-SK04

**Attachment III Letter from Planning and Lands Branch Development Bureau
Government Secretariat**

政府總部

發展局

規劃地政科

香港花園道美利大廈

電話號碼 TEL NO: 2189 7951

傳真號碼 FAX NO: 2845 3489



Planning and Lands Branch
Development Bureau
Government Secretariat
Murray Building, Garden Road
Hong Kong

本局檔號 Our Ref. DEVB (PL-L) 98/98/04/8

來函檔號 Your Ref. J1648-CS-002-HPLB-1907-00001-SHT (JR 063)

10 July 2007

Mr Simon So
Associate
WSP Hong Kong Ltd.
1/F, K.Wah Centre
191 Java Road
North Point
Hong Kong

RECEIVED ON					
10 JUL 2007					
PROJECT NO: J1648-063					
DISTRIBUTION	TO SEE	ACTION	RESPONSE REFERENCE	DATE	SIGNATURE
SSo.					/
ST					
REMARKS			SIGNED BY:		

Dear Mr So,

Hutchison Cell Sites
Proposed Installation of Mobile Base Station at
Ling Kok Shan, Lamma Island

Further to my letter dated 22 May 2007 to you, we have circulated your proposal for the Installation of Mobile Base Station at Ling Kok Shan in Lamma Island to parties concerned for comments. While other relevant parties have no particular comments on your proposal, comments from the Planning Department (Plan D) and the Environmental Protection Department (EPD) are highlighted below for your information and necessary action.

Plan D

The proposed site is zoned "Conservation Area" ("CA") on the draft Lamma Island Outline Zoning Plan (OZP) No. S/I-LI/8. The planning intention of the area is to protect and retain the existing natural landscape, ecological or topographical features of the area for conservation, educational and research purposes. There is a general presumption against development in this zone. In general, only developments that are needed to support the conservation of the

existing natural landscape or scenic quality of the area or developments that are essential infrastructure projects with overriding public interest may be permitted. The proposed mobile phone station, which is considered as a kind of "telecommunication electronic microwave repeater and/or radio transmitter installation use, in the "CA" zone requires planning permission from the Town Planning Board.

EPD

Based on the information available, the subject project which installs a mobile phone base station at Ling Kok Shan in Lamma Island will likely involve earthworks and/or building works in a conservation area. According to the Environmental Impact Assessment Ordinance (EIAO), it is a Designated Project (DP). DPs under Schedule 2 of the EIAO, unless exempted, must follow the statutory EIA process and require an Environmental Permit (EP) for their construction and operation. Before an EP can be obtained, a person planning the DP is required under sections 5 to 9 of the EIAO to apply for an EIA study brief, process with the EIA study and seek approval of the EIA report under the EIAO or seek a permission to apply directly for an EP. As such, you are advised to obtain an EP for the construction and operation of the project in question.

Should you have any queries regarding the above information, please contact Ms Maggie Chin of Plan D at 2158 6157 or Mr Matthew Chan of EPD at 2835 2163.

Yours sincerely,

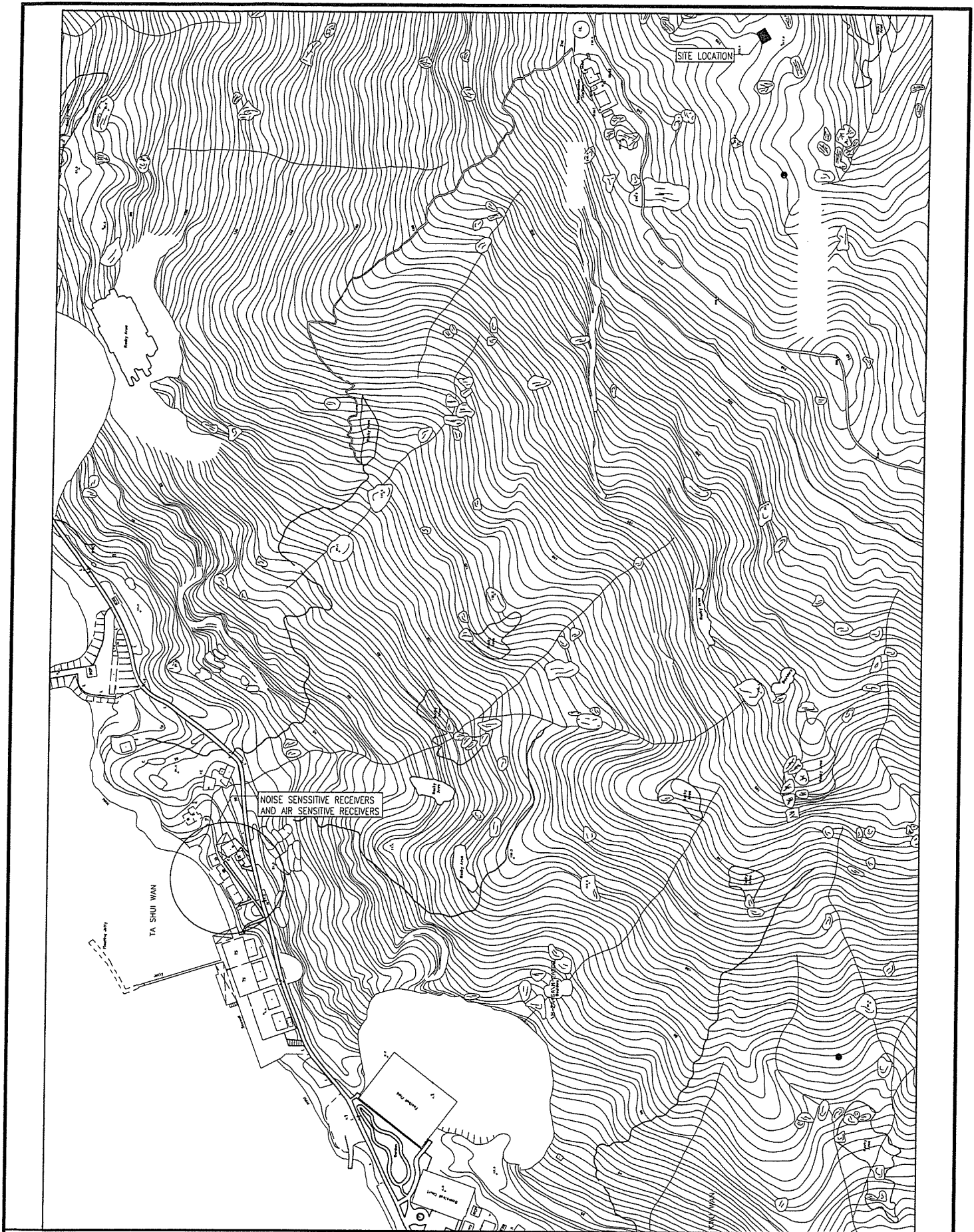


(Miss Zorina Wan)

for Secretary for Development

c.c. DPO/Sai Kung & Islands (Attn: Ms Maggie Chin)
DEP (Attn: Mr. Matthew Chan)
DGT (Attn: Mr. YS Leung)

Attachment IV Location Plan showing the Noise Sensitive Receivers (NSRs)



WSP HONG KONG LTD.

PROJECT	MOBILE BASE STATION AT LING KOK SHAN, LAMMA ISLAND	Drawn by	ST	Job No.	1812-073
		Checked	SS	Date	10/09
TITLE	NOISE SENSITIVE RECEIVERS (NSRs)	Scale	Dwg. no.	NRSs-01	
		NTS			

Attachment V Site Mark-up Photo

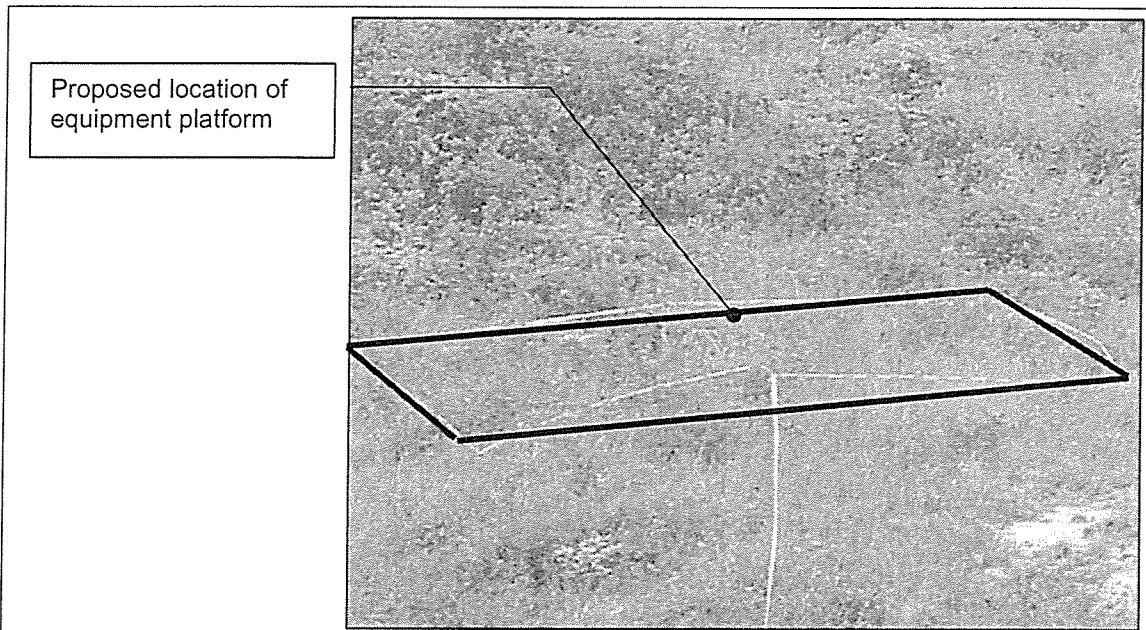


Photo No.	1
Location	Ling Kok Shan (832325.6E, 807311.4N)
Description	Proposed location of Equipment Platform

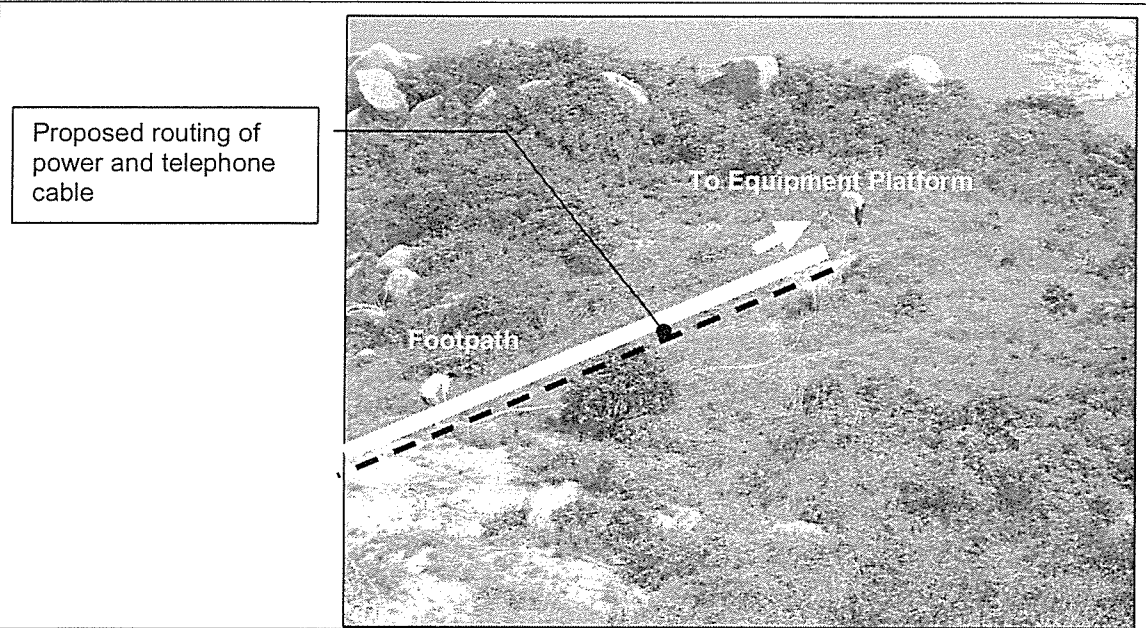


Photo No.	2
Location	Ling Kok Shan
Description	Proposed routing of power and telephone cable (First portion from equipment shelter)

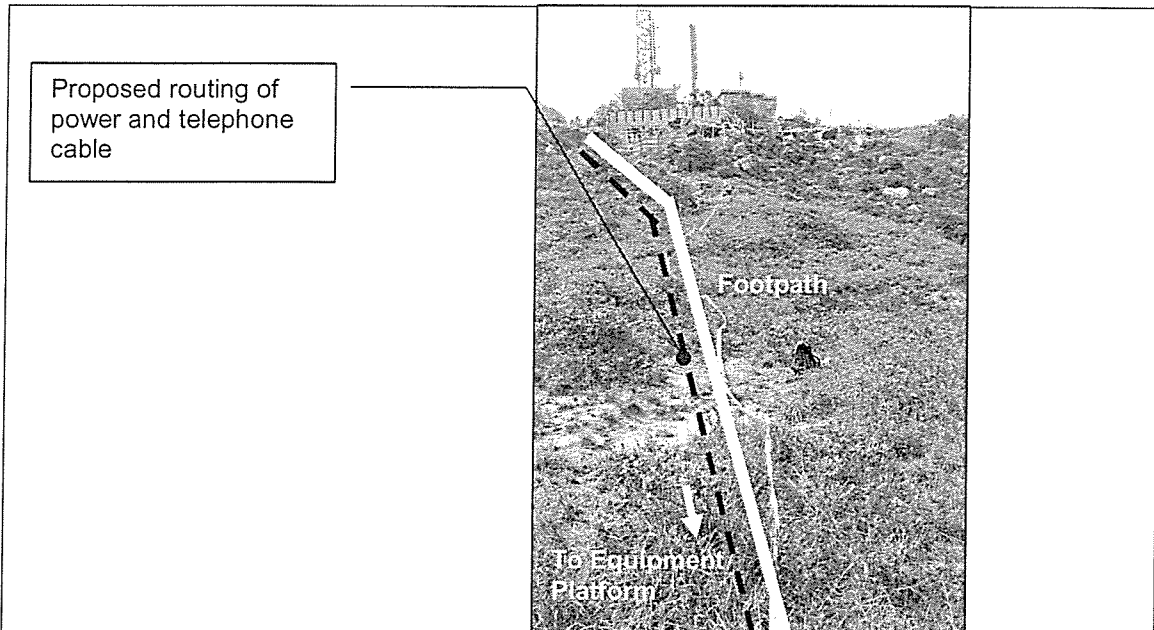


Photo No.	3
Location	Ling Kok Shan
Description	Proposed routing of power and telephone cable (Second portion from equipment shelter)

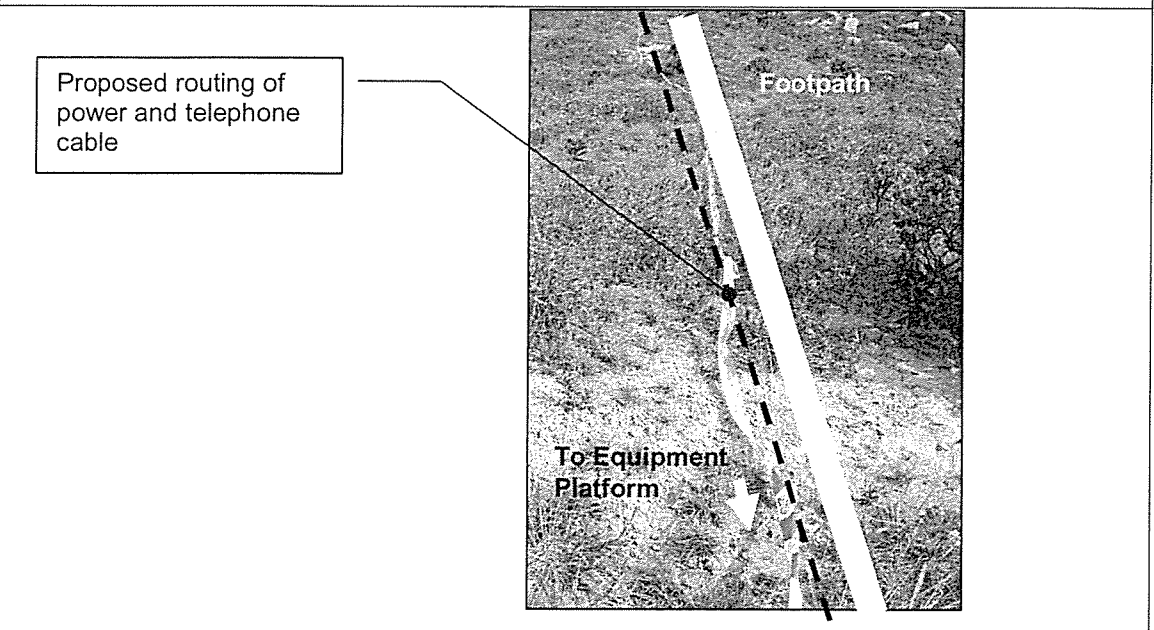


Photo No.	4
Location	Ling Kok Shan
Description	Proposed routing of power and telephone cable (Third portion from equipment shelter)

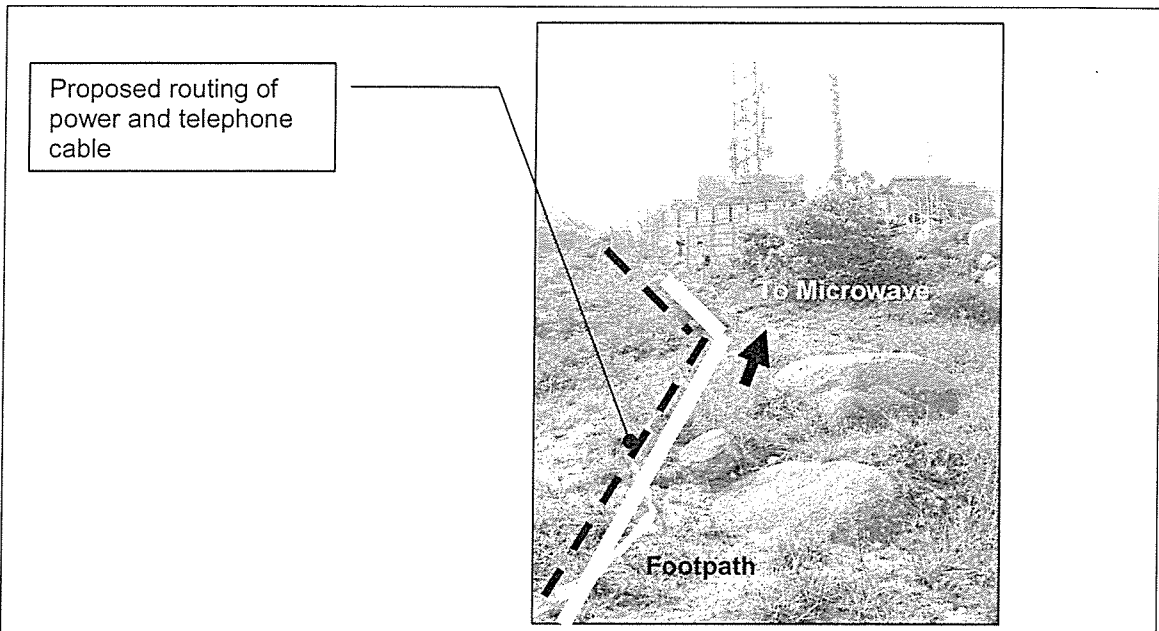


Photo No.	5
Location	Ling Kok Shan
Description	Proposed routing of power and telephone cable (Forth portion from equipment shelter)

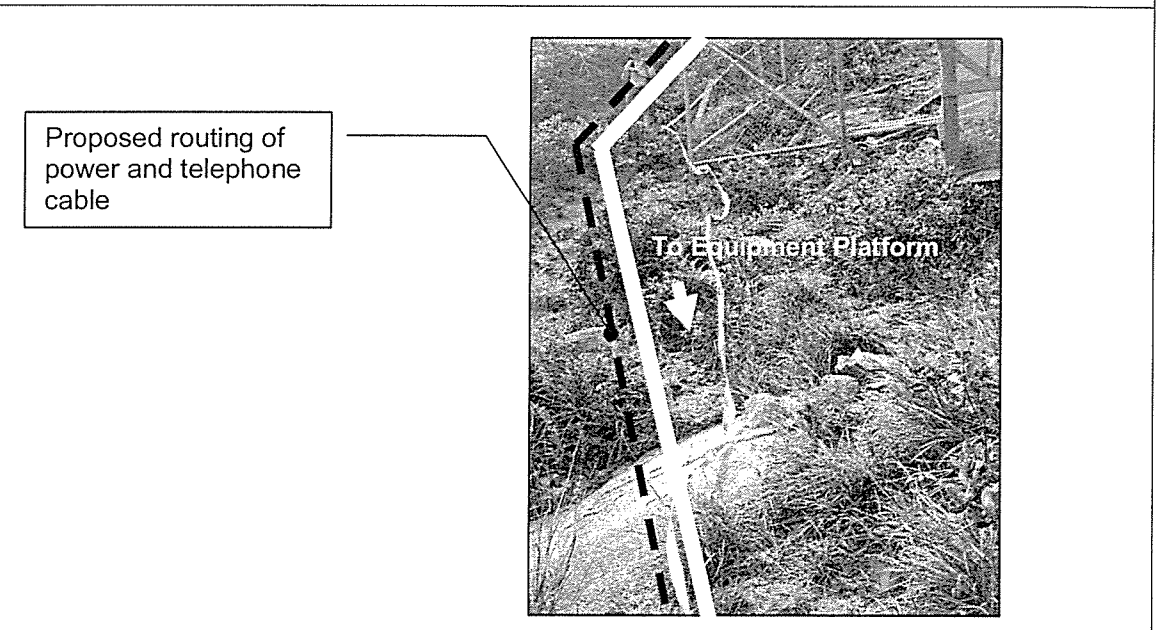


Photo No.	6
Location	Ling Kok Shan
Description	Proposed routing of power and telephone cable (Fifth portion from equipment shelter)

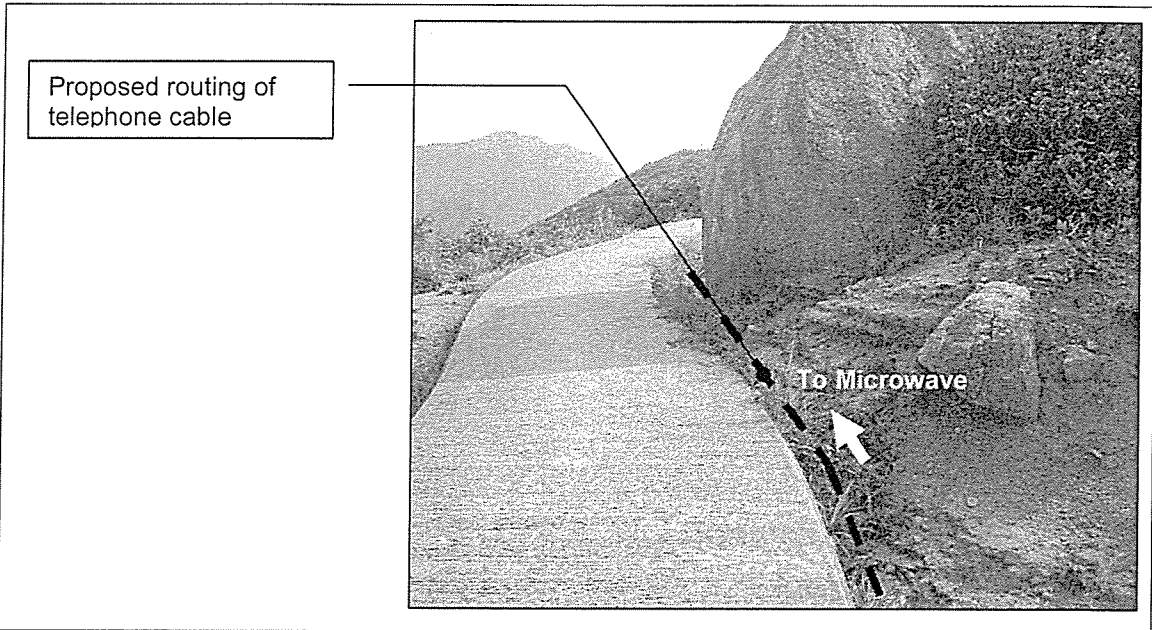


Photo No.	7
Location	Ling Kok Shan
Description	Proposed routing of telephone cable

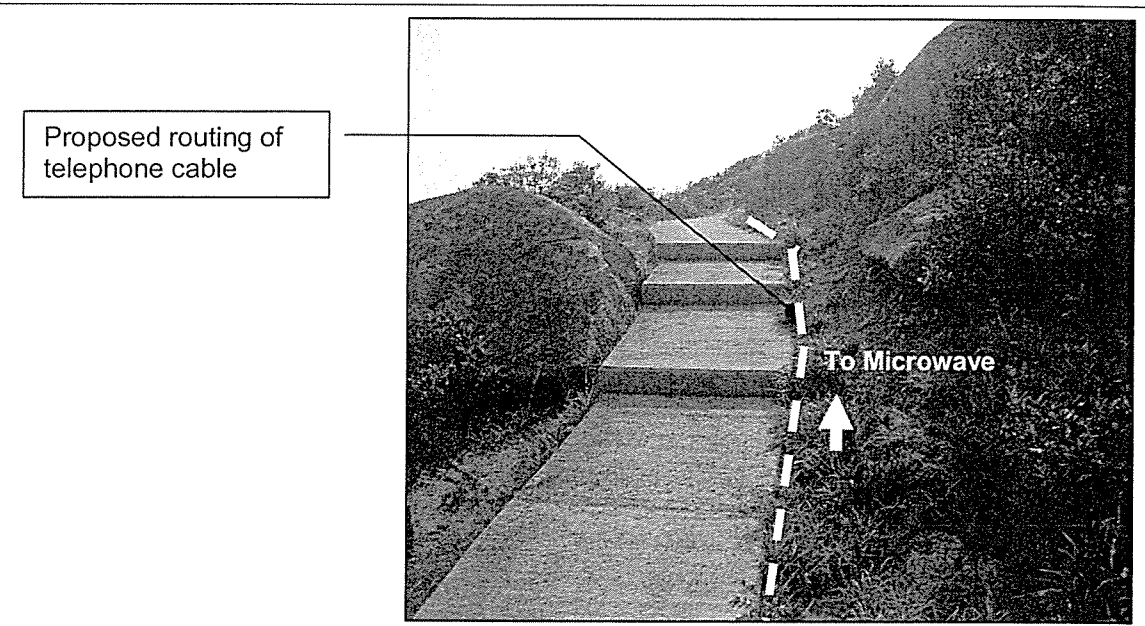


Photo No.	8
Location	Ling Kok Shan
Description	Proposed routing of telephone cable

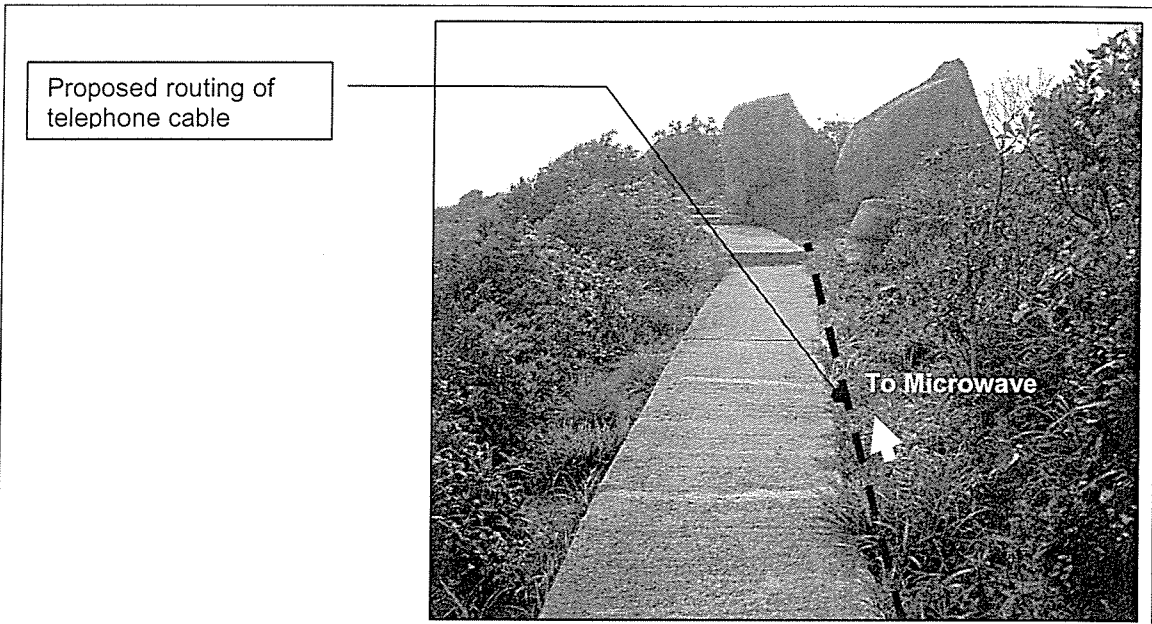


Photo No.	9
Location	Ling Kok Shan
Description	Proposed routing of telephone cable

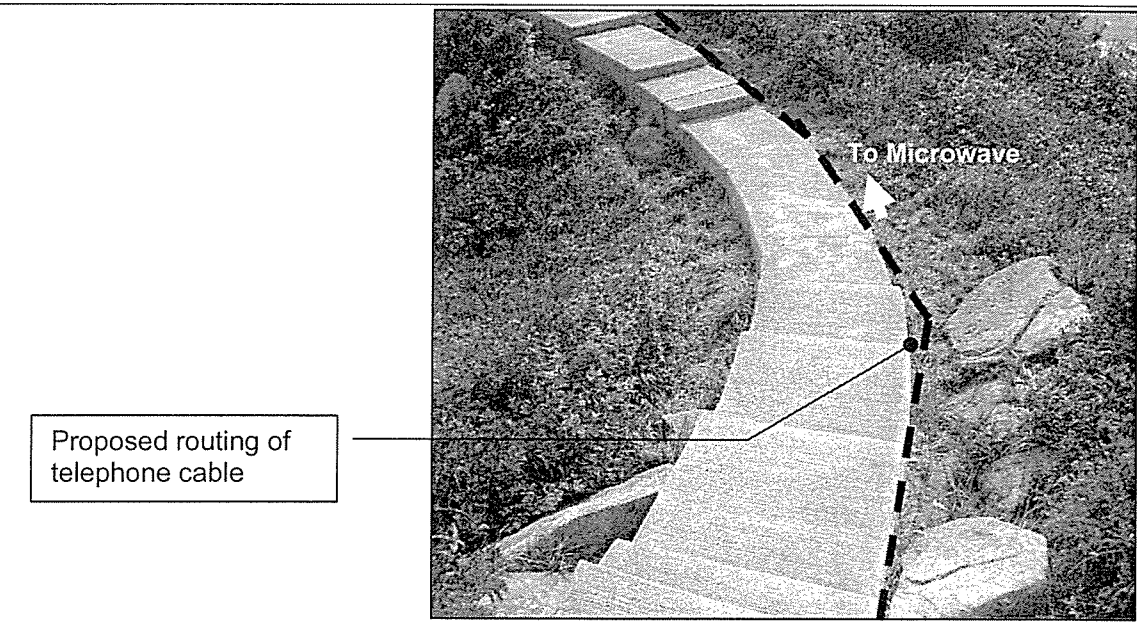
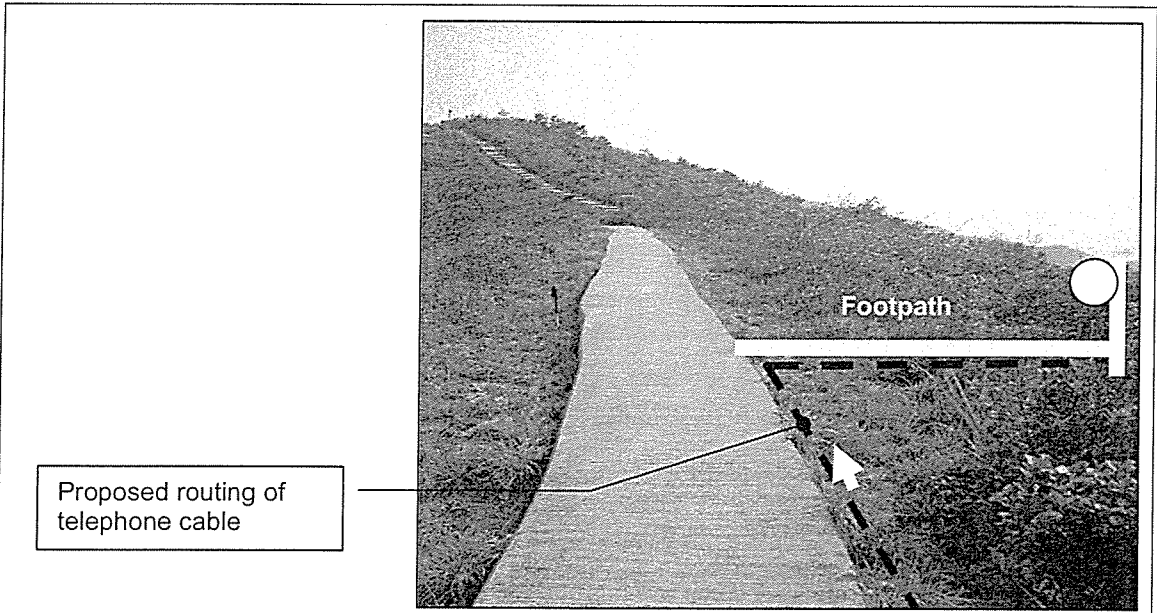
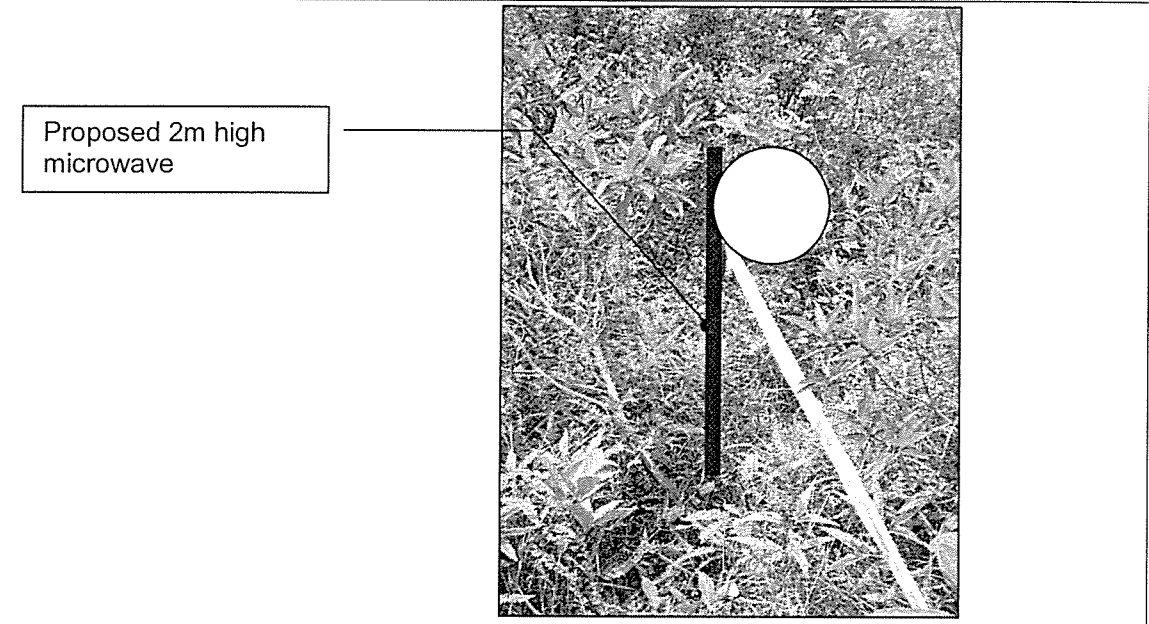


Photo No.	10
Location	Ling Kok Shan
Description	Proposed routing of telephone cable



Proposed routing of telephone cable

Photo No.	11
Location	Ling Kok Shan
Description	Proposed routing of telephone cable



Proposed 2m high microwave

Photo No.	12
Location	Ling Kok Shan
Description	Proposed location of microwave



Photo No.	13
Description	Common species observed in the proposed base for equipment, transmission tower and the temporary working area (2m from the edge of the equipment platform) – wild grass & <i>Metastoma sanguineum</i>



Photo No.	14
Description	Common species observed in the proposed base for equipment, transmission tower and the temporary working area (2m from the edge of the equipment platform) – <i>Metastoma sanguineum</i>



Photo No. 15

Description Common species observed in the proposed base for equipment, transmission tower and the temporary working area (2m from the edge of the equipment platform) – wild grass scrub



Photo No. 16

Description Common species observed in the proposed base for equipment, transmission tower and the temporary working area (2m from the edge of the equipment platform) – wild grass scrub



Photo No.

A

Description

One no. rare plants, *Artocarpus Hypargyreus* (1.2m high and 1.2m crown) was observed near the proposed footpath and transmission tower.



Photo No.

B

Description

One no. rare plants, *Artocarpus Hypargyreus* (0.7m high and 0.3m crown) was observed besides the existing footpath



Photo No.	C
Description	One no. rare plants, <i>Artocarpus Hypargyreus</i> (0.8m high and 0.5m crown) was found at 1.5m from the existing footpath to the proposed small microwave antenna pole



Photo No.	D
Description	One no. rare plants, <i>Artocarpus Hypargyreus</i> (1.2m high and 1.0m crown) was found at 3.7m from the existing footpath to the proposed small microwave antenna pole



Photo No.	E
Description	One no. rare plants, <i>Artocarpus Hypargyreus</i> (1.1m high and 0.3m crown) was found at 6.7m from the existing footpath to the proposed small microwave antenna pole



Photo No.	F
Description	Proposed micro-wave location with grass, patchy scrub and <i>Metastoma sanguineum</i>