

VOLUME 7 ISSUE 4, April 1998

The Roles of the Project Land Surveyor in the Construction of Major Highways Project Ting Kau Bridge and Approach Viaduct

By K.L. Chow MSc, AHKIS, ARICS

1. The Bridge

The Ting Kau Bridge and Approach Viaduct is part of the 34 km major highways system of Route 3. The project, in the form of a "Design and Build" contract, was awarded to the Ting Kau Contractors Joint Venture in August 1994 at a cost of HK\$ 1.73 billion by the Hong Kong, Government Highways Department.

The Bridge has adopted an innovative shipmast concept which results in a slender and aesthetically pleasing structure, and is marked as one of the largest combined-span cable stayed bridges in the world. Its design is complementary with the Tsing Ma Bridge and Kap Shui Mun Bridge of the Lantau Link. One of the outstanding features of this unique cable stayed bridge is the three single leg towers with heights of 170m, 194m, and 158m, located on the Ting Kau headland, on a reclaimed island in Rambler Channel and on the north-west Tsing Yi shoreline respectively. The other feature is the 4 planes of stay cables supporting the bridge deck.

Ting Kau Bridge at the Construction Completion Stage

The major scope of works includes the

The major scope of works includes the construction of a 1,177 metres 3-tower cable-stayed bridge spanning over the Rambler Channel and two 550 metres approaching viaducts, each carrying three lanes vehicular traffic, linking up with the Tai Lam Tunnel. The project also comprises two ramps, each of two lanes wide, connecting to and from the Tuen Mun Road.

The bridge is constructed for two transport planning purposes. It helps cope with the growing traffic demand between the northwest New Territories and the urban areas, and provides a convenient access to the New Airport for residents of the Yuen Long and Tuen Mun districts, without the need to pass through Tsuen Wan town centre.

2. Pre-Construction

The major land surveying activities in the preconstruction stage involve the definition of the project boundary and works limit, working out of an acceptable master bridge alignment, estimation of earthwork quantity, preparation



SURVEYING is the newsletter of the HKIS. It is distributed to members, students and friends of the surveying profession free of charge. Anyone wishing to receive a copy may contact the office of the Institute.

HKIS EXECUTIVE COMMITTEE 1997/98 President T. N. Wong - 黄天元 FHKIS, FRICS, RPS (LS) Samson Wong - 黄山 FHKIS, FRICS, ACIArb, AP, RPS (BS) Senior Vice-President S.C. Liu - 廖勝昌 Junior Vice-President MBA, FHIS, FRICS Honorary Secretary Winnie Shiu - 蕭慧儀 AHKIS, ARICS Graham Heath - 許富賢 Honorary Treasurer FHKIS, FRICS Barnabas H. K. Chung - 鍾鴻鈞 oc.Sc, FRICS, FHKIS. FBEng. FFB. FRSH. MIMgt, ACIArb, Gov WOBO, AP, RPS(BS) Chairman, Board of Education P. C. Lau - 劉炳章 MSc, FHKIS, FRICS, ACIArb, AP, RPS (QS) Immediate Past President Eric Y. M. Chung - 鍾耀明 BSc (Hons), DipLaw, AHKIS, FRICS, ACIArb, RPS (QS), Chairman, Quantity Surveying Division Barrister-at-Lay

Tony Tse - 謝偉銓 FHKIS, FRICS, RPS (GP) Chairman, General Practice Division

Chairman, Land Surveying Division

Chairman, Building Surveying Division

Chairman, Junior Organisation

SECRETARIAT

Gordon M. Y. Ng - 吳文仁 AHKIS, ARICS, RPS (GP)

Andy Wong - 王建業 AHKIS, ARICS, RPS (BS)

Kenneth J. K. Chan - 陳佐堅 FHKIS, FRICS, ACIArb RPS (BS)

K. L. Mok - 莫景良 FHKIS, FRICS

Editorial Contributions

Surveying encourages article queries and submissions. Article submissions should include both hard (printed) copy and a diskette in Word format. Contributions should reach the editor at the office of the Institute one month before the publication date.

Information & Contents

No part of this newsletter may be reproduced without the permission of the Institute. Contents of the newsletter do not necessarily reflect the views or opinions of the Hong Kong Institute of Surveyors and no liability is accepted in relation thereto.

Advertising

All advertisements and small ads are welcome. SURVEYING is reaching over 4,500 readers. For detailed information & advertising rates, please contact Ms Margaret Yung of the Secretariat office at 25263679 OR Mr. Charles Yiu of Corporate Culture at 2802 6949

The Hong Kong Institute of Surveyors

1934 Swire House, Chater Road, Central, Hong Kong. Tel: 2526 3679 Fax: 2868 4612 http://www.hkis.org.hk



of contract drawings, and drafting of contract documents in relation with survey matters.

To start from scratch, the Project Lnad Surveyor (PLS) has to firstly participate in defining the project boundary and works limit. The extent of area required should be large enough to cover various site activities during construction, whilst accommodating interfacing activities of adjoining contracts. After thorough study of the relevant document and site visits, the adopted project boundary and works limit are defined either by making reference to existing ground features or by means of computed co-ordinates for sakes of simplicity and easy identification.

Simultaneously, the PLS has to work out a feasible master road alignment design for the bridge and its associated roadwork according to the specifications of the Transport Planning and Design Manual for tendering purposes. Apart from the traditional field survey for capturing data in building up the 3-dimensional ground models, the PLS has to overcome some physical constraints during the design process. The proposed alignment and levels of the bridge and roadwork should match with other interfacing contracts, and fulfil the Marine Department's requirement by providing an acceptable headroom clearance above the sea level for navigation. The alignments are finalised after a series of trials and frequent liaisons with other government departments, and are integrated into the layout plans and dimension plans as part of the tender documents. Besides, the PLS has made use of the created 3-dimensional ground models to estimate the earth quantity prior the tendering exercise

On the other hand, the PLS is required to draft the contract documents in the survey aspects. These include the qualification and working experience of the Contractor's setting out surveyors, requirements of survey supporting staff and survey instrument, survey computer systems, specifications in standards and formats of graphical and digital data. To fulfil the quality assurance system requirements of ISO 9002, Working Procedures/Working Instructions in checking the survey submission by the Contractor and the surveying equipment, together with some Monitoring Plans for controlling the workflow and survey activities are also prepared.

3. During Construction

The survey activities are geographically divided into two parts, i.e. the checking surveys at the Ting Kau Bridge site and the off-shore steel fabrication yard at Shekou.

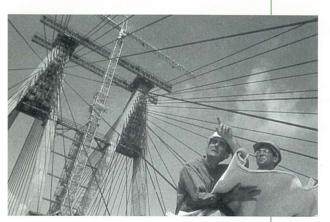
Ting Kau Bridge Site

To welcome the construction activities, the PLS has to plan and establish a series of primary horizontal and vertical control points before the onset of setting out and checking survey activities. There are a total of 5 primary horizontal control points, in the form of survey beacons, being built around the site. They are fixed with co-ordinates by linking up to the Hong Kong territory-wide geodetic control points by means of a survey network. Whilst, a chain of primary vertical control points are also established on both sides of the Rambler Channel. The levels of these points are broken down from the Lands Department bench marks by "Precise levelling" survey methodology.

To celebrate the commencement of the "Design and Build" project, the Designer as employed by the Contractor, started constantly submitting their presents, i.e. the design drawings, to the Highways Department for the "Notice of No Objection" to be issued. In response, the PLS has to check these drawings in respect of the location, geometry, and setting out data of the main features, provisions and proposals for interfacing with other contracts, headroom clearance of structures, clearance envelope of supporting cables of bridge, etc. Appropriate feedback will be relayed back to the Contractor and his Designer before the design can be finalised as working drawings.

The PLS is also required to check the Initial Topographical Survey Plans of the site, the Initial Sounding Plans of the Rambler Channel, and their corresponding digital files as submitted by the Contractor. These involve the field verification, joint hydrographical surveys, and checking of the drawings against the required "standard and format of graphical and digital data".

To ensure that the construction works are undertaken in the proper manner, the



Contractor is required to submit the Construction Method Statement (CMS) of each construction activity. The CMS should be approved prior to the actual construction. As far as survey activities are concerned, the PLS has to comment on the Contractor's proposed survey methodology, survey accuracy, and instrumentation etc., which forms part of the CMS submission.

When the construction activities start, the PLS is required to check the Contractor's setting out works. This is to ensure that the structures are being constructed according to the designs. If the setting out tasks are outside the tolerance of the "Outline Construction Specification", a "Non-conformance Report" summarising the surveyed discrepancies would be issued to the Contractor for appropriate remedial actions. This being part of the quality assurance system of the project.

Apart from the above activities, the PLS has to conduct various kinds of monitoring surveys. These include the monitoring of the slopes

movement, 24-hour checking of the positions of the reinforcement of the tower base during the concrete pouring of the tower foundation, verticality of the towers during slipforming, alignment and levels of towers at various construction stages, settlement of the towers and seawalls, the alignment and levels of deck panels during the bridge erection process etc. Different survey methodologies, such as network observation, direct levelling,

"autoplumb" observation, simultaneously reciprocal trigonometric heighting, cross-harbour levelling etc., are applied according to the accuracy requirements and the physical environment conditions.

Offshore Steel Fabrication Yard at Shekou of China

While the three sky-high towers are emerging from the site, the PLS has simultaneously been allocated with

new challenges at the offshore fabrication yard in Shekou of Mainland. Survey activities in the yard mainly focuses in the as-built surveys of the steel tower head boxes, tower struts, and the trial assembly survey of the steel deck panels. Most of the checking surveys are carried out in the early morning to minimise the temperature variation effects.

The offshore checking activities are critical to the progress of the project. The as-built survey results of the tower head boxes, tower struts and cable anchorage tubes enable the computation of the length of stay cables, and provide reference points for the positioning of these structures at the site. Whilst, the trial assembly survey is to ensure the correct geometry of each deck panel. It also locks the inter-relationship between two adjacent panels by means of bolts and nuts, which enables the restoration of their geometry in the erection process later at site.

4. Post-Construction

In the post construction stage, the major survey

activities fall into the checking of the "Asconstructed" survey plans and drainage record plans together with the digital files submitted by the Contractor, and the documentation of the life time records.

Similar to the checking of the initial survey survey plans, field verification, joint hydrographical survey, and examination of both graphical and digital format are required before the Contractor's final survey plans can be accepted for records. Whilst, the documentation of life time records is to be done according to the project requirements to enable efficient retrieval of relevant information for future maintenance and reference.

5. Conclusion

In this project, the surveyors like other engineering site staff have come across a lot of challenges which enrich them with invaluable experience and memories. The bridge eventually comes into being after so much hard work from the participants. The success is however not without difficulties.

Time constraint is one of the main difficulties in the project. In the pre-construction stage, the surveyors have to compete against the very tight time schedule, in working out the alignment of the bridge, and the preparation of the contract drawings and contract document for the tendering exercise.

During the construction, the physical constraints, apart from urgency, imposed additional difficulties for the surveyors in checking against the Contractor's setting out works. This has particularly been reflected in the need to establish repeatedly the control points on the top of the 3 towers during construction at various stages, where the limited working space is diminishing with the increase in height of the towers. The surveyors have sometimes to act as acrobats to shuttle between the congested steel reinforcement and temporary scaffolding to carry out their checking

duties, while other engineering works are being in progress simultaneously. It is heard that the surveyors have on some occasions been regarded as "Peeping Toms" while they are manipulating their theodolites to sight through the small holes left between huge reinforcement cages around them for bearing orientation.

The surveyors at Shekou face another challenge at the same time. Apart from the requests to conduct various checking activities within limited working hours in the early morning, they have to communciate in Putonghua with the local survey supporting staff, i.e. Chainman, as provided by the Contractor. A lot of jokes are heard initially before they can master the language. As observed now, the surveyors are no longer pronouncing the

Putonghua as "Bo Tung Kwa" after working a year offshore at the yard.

As one of the partcipants in the project, the PLS sincerely invite you to come and have a look at the bridge after its opening. The following information are perhaps worth noting for sharing with your friends when you are on your way across the bridge.

Tower Heights

Ting Kau Tower	167m
Central Tower	194m
Tsing Yi Tower	162m

Bridge Deck Level (above Hong Kong Principle Datum)

Ting Kau Tower	+79.5m
Central Tower	+73.2m
Tsing Yi Tower	+66.6m

Stay Cables

No. of Cables 96 x 4 (place)	384

Tower Cables

	VEXCESTIBLE
No. of Transverse Cables	64
No. of longitudinal Cables	8

Bridge Decks

Total length	1,177m
Main Spans	
Ting Kau Tower - Central To	wer 448m
Central Tower - Tsing Yi Tow	ver 475m
Typical Deck Width (each sid	e) 18.77m
Weight of Structural Steel	9,200 tonnes
Weight of Concrete Panels	29,000 tonnes

The above statistics are just for information only. Please do not attempt to count the number of cables while you are driving on the bridge for safety sakes!!!

Message from the President

The Progress.....

Four months have gone. Your council members and members of various committees and



working groups worked very hard in the following:

1. Five-Year Plan

The plan requires intensive and extensive input and effort, not only from your Council, but also from each and every member to make it work. May I urge all members to participate in the programs. We need a convenor for each of the programs and we need your help.

2. New Accomodation

One of the programs of the Five-Year Plan is to find new accommodation. The good news

is that the administration office will move from Swire House to Suites 510-511, Jardine House in early June this year. Special thanks to our Senior Vice-President, Mr. Samson Wong, Hong Kong Land, Mr. Daniel Kwok, ex-Secretary General, Mr. Eddie Lai and Mr. Edwin Tsang, and all those who have put in their time and effort to make this possible. The bad news is that we still have to rent it. We hope to have our own premises in future. Members are asked to give a thought to this idea and advise Council on how we can achieve this. Your suggestions are most welcome, fund raising may be one of the options.

3. HKIS and RICS Affiliation Agreement

With the dissolution of the RICS, Hong Kong Branch, on 1st September 1997, an affiliation agreement between HKIS and RICS is being arranged to look after the interests of RICS members in Hong Kong. The agreement will be for a duration of three years, to end on 1st September 2000. Mr. Nicholas Brooke, convenor, and members of the working group hope to have ready the final version of the affiliation agreement before the RICS President's visit on 27th or 28th May 1998.

4. Election Committee Subsector Elections and Legislative Council Election

We have successfully secured 10 seats in the Election Committee. Congratulations to those who were elected. Members who are registered voters are urged to exercise their right to vote for the elected candidates, who can promote our profession, on 24th May, 1998. For those who have not registered, please do so in the coming year.

5. Code of Measuring Practice

A guide for surveyors and valuers, will be finalised and endorsed by the Council, once the subject of gross floor area has been ironed out.

GOVERNMENT CIRCULARS

The following are available for inspection at the Secretariat Office.

Buildings Department

PN 77	Mass Transit Railway Protection
	- MTR (Land Resumption and Related Provisions) Ordinance
	- Buildings Ordinance Scheduled Area No. 3
PN 85	Development in Mid-Levels Scheduled Area
	- Buildings Ordinance Section 2(1) - Building (Administration) Regulation 8(1)(bb)(vii) and 8(1)(1)
PN 88	Hong Kong Airport (Control of Obstructions) Ordinance, Cap 301
	Temporary Exemption from the Operation of a Height Restrictions Order
PN 142	Retaining Walls - Building (Construction) Regulations 1992 - Part XIII
PN 154	Submission of Record Plans for Alteration and Addition Works
DV 204	- Building (Administration) Regulation 46
PN 204	Guide to Fire Engineering Approach
PN 214	New Contractor Registration System and the Contractors Registration Committee
PN 218	Facilities for External Maintenance of Buildings
PN 222	Structural Plans of Glass Reinforced Polyester (GRP) Water Tanks

Environmental Protection Department

PN 1/98 Control of Air Pollution in Semi-Confined Public Transport Inter-Changes

All ProECC Practice Notes can be downloaded from their World Wide Web homepage at http://www.info.gov.hk/epd. PN 1/98 is also available from the Secretariat Office, collect a copy in person or request a copy by sending a stamped and self-addressed envelope (postage \$1.3).

Planning Department

Plans and Documents available for Public Inspection at the Planning Information and Technical Administration (PITA) Unit

An index (both in English and Chinese) listing the documents, plans and publications and reports etc are available for inspection at the PITA Unit of Planning Department at 17/F, North Point Government Offices, 333 Java Road, North Point, Hong Kong. The index will be updated once every 3 months.

A copy of the index is also available for inspection from the Secretariat Office.

Works Bureau

WBTC No. 5/98	On Site Sorting of Construction Waste on Demolition Sites
WBTC No. 4/98	Use of Public Fill in Reclamation and Earth Filling Projects
WBTC No. 10/97A	Use of Performance Bonds Security and Retention Moneys and Standard Form of Bond
WBTC No. 21/95A	Capital Works or Maintenance Works in the Vicinity of the Kowloon-Canton Railway
	(Hong Kong) Section

Survey and Mapping Office

SMOI Tech 3/98 Handling of Land Boundary Plans and Survey Record Plans submitted by Authorised Land Surveyors and Registered Professional Surveyors

NEWS FROM THE SECRETARIAT

By Winnie Shiu, Hon Secretary

Goodbye Eddie and Welcome Gordon

Our ex-Secretary General, Eddie, left us this month after serving the Institute for about 2 years. He will be returning to the UK for good and we would like to take this opportunity to wish him all the best.

Our new Secretary General, Gordon NG, joined us early this month to take up the duties from Eddie. Here is Gordon's own introduction:

General Practice Surveyor. I am an associate member of the Institute, having obtained all round professional experience from working in the valuation department of a major bank, a fast growing property development and investment consultancy surveying firm, a medium scale local property developer, a project management surveying firm and a South-East Asian proprietary property investment company. I also had the opportunity to work for a property development subsidiary of a Hong Kong property developer down-under in Sydney, Australia, some eight years ago, and have travelled to many cities in South-East Asia and Mainland China on business.

For my new role as the Secretary General of our Institute, I take it as a big challenge because of the difference in the nature of work. I also consider this to be a rare opportunity to serve the Institute to gain administrative experience in a non-profit making, professional, membership, government and public advisory environment; to broaden my view on various aspects of the profession and property industry and

to add knowledge from a different perspective. I shall endeavour to employ my versatile ability and pro-active attitude and help the General Council strengthen its functions and to provide a quality service to members of the Institute in Hong Kong's ever changing socio-economical climate. ? ?

FIG '98

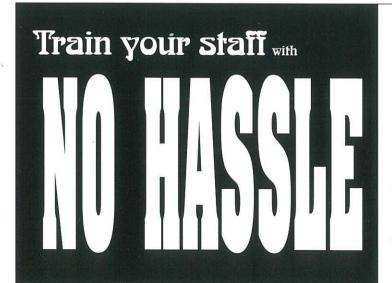
The FIG's XXIst Congress will be held at Brighton, UK, from 19th to 25th July 1998. The theme for this year is "Developing the Profession in a Developing World". Your Institute will have representatives attending this event. If you plan to attend and are interested to join or wish to have further information, please contact Miss Margaret Yung at the Secretariat.

Relocation of the HKIS Secretariat

The Secretariat Office will be moving to Suites 510-511, Jardine House, Central (just a short distance from the existing office in Swire House), in June. Further information will be forthcoming in the next issue of "Surveying".

HKIS MasterCard Gold Card

By now, all members should have received their application forms for the HKIS Mastercard Gold Card. We would like to draw your attention to the invitation letter attached with the form. Please note that the free HKIS stylish sports watch and umbrella will only be offered to the principal card cardholder. However, both principal and supplementary card cardholders are entitled to perpetual annual fee full waiver.



Effective Training, Induction, and Promoting Management Conceptual videos will do it for you. Just pay one-time production fee and you don't have to worry about anything after all.

For more information, please contact *Ken Wong* or *Charles Yiu* of Corporate Culture at *Tel.* 2802-6949 & *Fax.* 2566-6976

We have served G2000, Wellcome, China Light & Power, City University, Civil Engineering Department, Graham Hospital...etc.

BUILDING SURVEYING



News from the Building Surveying Division

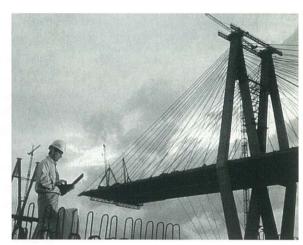
By Kenneth J. K. Chan, Chairman

Professional Charges for Building Surveying Services

The General Council at its meeting on 10th March 1998 approved BSD's proposed "Professional Charges for Building Surveying Services".

Apart from a revision to the fees and charges, two additional sections have been added to the existing edition, these being 'Building Surveys and Determination and Measurement of Floor Areas' and 'Building and Fire Safety Inspections'.

This scale of charges will be officially published by the Institute and a complimentary copy given to corporate members of the BSD. It will also be available for sale to other members and the public.



Ian Cullen & Associates is a G.P. chartered surveying practice established over 10 years providing consultancy on Hong Kong property; valuations, surveys, landlord & tenant matters, planning, development and estate agency issues, to a variety of prestigious corporate clients, and we now have an immediate vacancy for:

CHARTERED SURVEYOR

Requirements - Minimum 3-5 years post qualification experience

- Good English & Cantonese.

- Wide ranging, in relation to valuations, landlord and tenant, compensation, residential

property management, planning & development etc.

Benefits - Interesting work in lively fast expanding office

- Competitive 13 month salary with bonus

Please send hand written application with full resume to:



Duties

lan Cullen & Associates

Chartered Surveyors – Valuers Property and Development Consultants 8/F Crocodile House Two 55 Connaught Road Central Hong Kong



QUANTITY SURVEYING

News from the Quantity Surveying Division

By Eric Chung, Chairman

Meeting with AIOS President

Mr. Paul Lonsdale, President of the Australian Institute of Quantity Surveyors (AIQS) made an official visit to Hong Kong and together with AIQS's representative in Hong Kong, Mr. Frankie Yeung, met Mr. T. N. Wong, our President, Mr. Gordon Ng, our new Secretary General and myself on 23rd April, 1998.

The issue of reciprocity was raised again. Mr. Lonsdale agreed to provide further information on the structure and guidelines for the professional interview, which is the qualifying assessment for AIQS membership. The QSD has formed a sub-committee chaired by Vice-Chairman Mr. T. T. Cheung to study the issue generally and their recently published National Competency Standards in particular.

Nomination of HKIS's Representative on HKIArb Committee

HKIS have been approached for a representative to serve on a committee formed by The Hong Kong Institute of Arbitrators ("HKIArb") to continue the work previously undertaken by The Hong Kong International Arbitration Centre ("HKIAC"), which led to the introduction of the Arbitration (Amendment) Ordinance (No. 75 of 1996) which has incorporated only what were considered as urgent amendments. The work undertaken by HKIAC (chaired by Mr. Justice Kaplan, as he then was) included a report on preliminary suggestions as to how to free Hong Kong from the outdated and illogically arranged English Arbitration Acts 1950-1979.

With the endorsement of the Executive Committee of the Institute, Mr. Michael Charlton, FHKIS (Past Chairman of The Chartered Institute of Arbitractors (Hong Kong Branch)), has been nominated as H K I S 's representative to serve on this committee.

Term Visits to Universities

In response to JO's

invitation, the QSD together with other Divisions visited the surveying degree course students at The University of Hong Kong, The Hong Kong Polytechnic University and The City University on 12th March, 14th and 23rd April 1998 respectively.

Thanks to T. T. Cheung, Alex Ho, Paul Fung, for taking time to attend these annual events which were very well received and ran late into the evening.

Bridging Courses for Building Degree/ Higher Diploma Students

Concern has from time to time been expressed by students studying Building Technology and Management degree and higher diploma courses in Hong Kong as to the avenues open to them for switching to the QS profession. The College of Estate Management ("CEM") has extended its distant-learning QS courses to Hong Kong, completion of which will lead to full exemption from RICS's academic requirements. There is at present no bridging course offered by any local college for these students similar to that offered by the CEM. Some fear that the HKIS may not accredit CEM and as a result remove the last opportunity to complete the academic stage



locally. The Board of Education is aware of the situation and will take on board such concern in its review of its accreditation policy, including if necessary, holding discussions with the Universities offering the fully-exempting courses to consider setting up similar bridging courses.

APC 1998

Note to APC candidates 1998 - Reference is made to "Surveying", March 1998 issue. Owing to the anticipated increase in the number of candidates applying for the final assessment this September, a larger examination hall will be required. The APC is now scheduled to be held on 14th and 15th September 1998 at the Hong Kong International Trade and Exhibition Centre. Details of the examination hall, together with a location map, will be despatched to those candidates who have been approved to take the final assessment this year.



LAND SURVEYING



News from the Land Surveying Division

Survey and Mapping Office Instruction - Technical No. 3/98

By K L Mok, Chairman

In the last AGM, members inquired as to the purpose of submission of Land Boundary Plans and Survey Record Plans to the District Survey Office, because those plans were not accepted for records or for reference, even though they were prepared in accordance with the prescribed Code of Practice. The opinion has been reflected to SMO. On 25th March 1998, the Deputy Director/Survey & Mapping, Lands Department, issued the captioned instruction, which specifies the mechanism in the handling of LBP and SRP submitted by ALS and RPS (LS). The main changes are cursory checks will be provided and the surveyed boundary will be incorporated in the Cadastral

Information System for general reference. With permission of SMO, the captioned instruction is available for inspection at the Secretariat Office.

The 1st Conference of Corporate Members of the Chinese Society of Geodesy, Photogrammetry and Cartography

By Ted Chan, Mainland and International Affairs

Mr. Mok King Leung and myself, on behalf of LSD of HKIS, had the great honour to attend the 1st Conference of Corporate Members of the Chinese Society of Geodesy, Photogrammetry and Cartography (中國測繪學會第一次團體會議) which was held at Shenzhen City from 31st March to 4th April 1998.

We arrived at Shenzhen in the afternoon of 31st March, and went directly to Sichuan Hotel (四川實館), the place where all the representatives of the Corporate Members

over the whole country were to stay for the next four nights. After checking in at the hotel and registering for attendance of the Conference, we commenced our social activities by meeting other representatives. During the welcome dinner, we met some of the representatives, exchanged name cards, learnt the backgrounds of the representatives etc. There were over seventy representatives attending this Conference.

On the morning of 1st April, after the hotel breakfast at 7:00 a.m., we all took a ten minute walk to the Shenzhen Urban Planning & Land Administration Bureau (深圳市規劃國土局) for the official Conference opening ceremony.

After the speech from Mr. Feng Meng Hua (馮孟華先生), the Secretary General of the Society, numerous other academic reports and speeches were presented on this and the following day.

As always, long speeches can at times, distract the attention of the audience. However the presented papers were most interesting. For instance, a paper named "The Technology of the three Ss and the Agricultural Development"("三S"技術與農 業發展). Although this is not a new application, as many of us know it is common practice to apply the technology of remote sensing, GPS and GIS to agriculture, particularly in the United States, we were glad to know it had almost broken down the communication barrier. The people in the mainland had more chance to know about the high-tech world. But the most exciting feeling was that somebody was able to recommend the technology of the three Ss applying to the agricultural development at the highest level of the Chinese Government.



The 1st Conference of Corporate Members of the Chinese Society of Geodesy, Photogrammetry and Cartography

LAND SURVEYING

Mr. Chan Hak, our Deputy Director / Survey & Mapping, gave a speech about the GIS in Hong Kong.

Mr. Mok King Leung, our LSD Chairman, gave a speech about the profession and registration system of land surveyors in Hong Kong. His speech was so attractive to all those attending, as professional development and a registration system for mainland land surveyors, particularly in Shenzhen, creates the need for a careful study of the Hong Kong experience.

A great break-through during these few days was the chance to meet the person-in-charge of the Shenzhen Institute of Surveying and Mapping. Initially, we have scheduled an arrangement for our members to visit their Institute and the Shenzhen Urban Planning & Land Administration Bureau around mid June as a CPD event. Details will be announced shortly.

Another reward was to meet Professor Li De Ren (李德仁院士), Principal of Wuhang Technical University of Surveying and Mapping (武漢測繪科技大學), to discuss the possibility of our members to join the 2nd Exchange of Surveying and Mapping Technology across the Strait which is scheduled to be held in Taiwan about early to mid September of this year. I will follow up this important event, and let you know how to apply. By the way, if you find yourself interested in this matter and want to give me a hand, you are always welcome to contact me.

Back to the conference. During our group discussion, we found that the Mainland survey organizations are facing similar problems as our private sector in Hong Kong i.e. the problem of unhealthy competition,

lowering the tender prices without concern for the quality of the survey. As a result, the strongest surveying organizations cannot survive. Please note, the "strongest", not the "weakest" as in the law of nature, because the strongest ones are not able to win any tender and jobs to maintain the continuity of the business. On the other hand, the weakest ones win the tenders and jobs with very unreasonable and unbelievable prices, but their work quality affects the status of land surveyors and the field of land surveying seriously.

Anyway, the conference was interesting and rewarding in general, and the most important thing is to keep contact with our mainland brethren.

LSD Careers Talk

By Y. M. Tau, Student Affairs Unit

The LSD Careers Talk held on 17th March was very successful and well attended by some 80 students/student members. During the time of Q & A, many issues were raised and discussed. The feedback from the forum was impressive and encouraging. Many thanks are given to Messrs. Kwan Lam Fat and Jacky Tull for their hard work.

Student membership application forms were distributed but was insufficient to meet the great demand. However the student representatives have been informed to approach the HKIS administration office for additional forms.

I still have the impression that not many student members know about the issue of volunteer supervisors. For those student members working in private organizations where qualified supervisors are not available, they can write to HKIS LSD requesting a supervisor. iţk

Visit to the Hong Kong Polytechnic University

By Yvonne Cheu, Division Secretariat

The Land Surveying Division Council visited the Land Surveying & Geo-Informatics Department (LSGD) of the Hong Kong Polytechnic University (HKPU) on 7th April 1998. Since HKPU is the leading institute in Hong Kong providing fundamental training for land surveying students, the objective of the visit was to establish a close contact with HKPU.

Mr. K L Mok, the LSD Chairman, accompanied by 7 council members participated in the visit. We were welcomed and received by Professor Y.O. Chen, the Department Head of LSGD. He gave a concise and informative introduction on the department's organization as well as the current and future development. We then visited their laboratories which were equipped with various survey instruments and computing facilities.

The visit was highlighted by a open discussion among the council members and the department's staff. Mr. Mok gave a brief introduction of the HKIS. We then exchanged views on a number of commonly interested topics, including the development of land surveying profession, the careers of the HKPU graduates... etc. Many valuable comments and suggestions on the promotion of the land surveying profession were received during the discussion.

The visit was successful. It bridged us to the LSGD and improved our mutual understanding. We look forward to arranging regular visits to the HKPU. işi

GENERAL PRACTICE



CPD Events

By W F Yik, Division Secretariat

It is encouraging to hear that the CPD namely 'Evaluation of Electronic Road Pricing (ERP) Technology for Hong Kong' held on 16th April 1998 was well attended. Over 100 persons from different divisions reserved their seats for the events. We would like to thank their support, and we promise to continuously arrange more CPD events with interesting topics in the future.

Indeed, another CPD event is being arranged around June/July 1998. It will be a one day visit to Shenzhen Institute of Surveying and Mapping. We will announce the details once the schedule is confirmed.



The 2nd Conference of Exchange of Survey & Mapping Technology across the Straits (海峽兩岸測繪學術交流會)

The 2nd Conference of Exchange of Survey & Mapping Technology across the Straits will be held in Taiwan in September 1998. It is proposed to arrange a delegation to take part in the Conference. Any member who would like to join the delegation to attend the Conference, or would like more information, please contact Mr. Ted Chan, Co-ordinator of Mainland & International Affairs, at Tel. 2967 8862.

News from the General Practice Division

By Tony Tse, Chairman

1. Contacts with Mainland China

The one-day valuation seminar jointly organised by GP Division and the Guang Dong Institute of Real Estate Appraisers (廣東省房地產估價師學會) will be held on 8 June 1998 from 9:00am to 5:30pm at the Hong Kong Convention and Exhibition Centre, Wanchai. The delegation from Guang Dong comprises over 20 senior appraisers. As valuation practices could be quite different in both areas, it is a unique opportunity for the valuation practitioners and academics in Hong Kong to meet the appraisers from Guang Dong and to attend to the presentation of valuation papers and cases from representatives of both areas in this Seminar.

The seminar is a CPD event, qualifying for six hours. The registration fee for members of HKIS and non-members is HK\$380 and HK\$450 per person respectively which includes conference lunch, documents, morning and afternoon teas. Details for admission will be distributed to Members soon.

2. Building Management Resources Centre (BMRC)

The first BMRC starts operation on 27 April 1998. HKIS is one of the professionals to give advice through the Centre on matters relating to lease conditions, land administration, repair maintenance, tendering procedures, condition surveys, building safety aspects and the selection of contractors. Interviews will be conducted on Friday evenings from 6:30pm to 10:00pm and prior to the interviews, the duty professional will be

presented with details of the advice sought. A flat fee of HK\$300, to cover the travelling/parking expenses incurred for attending an advice session, will be reimbursed to each volunteer professioanl. Mr. Stephen M. W. Yip is now calling for volunteers. For details, please contact Mr. Yip at 2869-7138.

Your support to "man" the Centre is urged.

3. Assessment of Professional Competence

The April APC has just been completed. Your Divisional Council will be reviewing the structure and format of the APC and some changes are likely. Comments on the matter are most welcome, please send them either to Mr. Jeff Y. T. Lam (Tel: 2231-3398 & Fax: 2523-1620) or Mr. Tony W. C. Tse (Tel: 2835-6626 & Fax: 2893-5937).



A CPD event, organised by the General Practice Division, was held on 27th March 1998. The guest speaker, Mr. Andrew H. C. Pang, Government Co-ordinator of KCRC, gave an interesting talk on the West Rail, Railway Development Project. Above, our host Mr. Francis Lam presents a souvenir to Mr. Pang.

FEATURE

Beware of cheques given in "full and final settlement'

By John B Molloy, LLB (Hons), BSc (Hons), FHKIS, FRICS, ACIArb, Director of James R Knowles (Hong Kong) Ltd

It is common in final account negotiations for one party to attempt to dispose of the matter by sending the other party a cheque stating that it is 'in full and final settlement of all matters in respect of the contract'.

Contractors and sub-contractors traditionally handle such an approach by firstly putting the money in the bank and secondly going back to argue for more money at a later stage.

However this would appear to be a dangerous approach following the case in England of Newton Moor Construction Limited v. Charlton (Court of Appeal 1981) ConLJ 1997 Vol 13 No. 4.

In this case Newton Moor did some building work for Mr Charlton. The tender price was £11,020. After completion, and as a result of some changes, Newton Moor sent a bill for £18,612. Mr Charlton claimed he was entitled to a set-off an amount for the fact that completion had been delayed, and recalculated the sum partly on agreed prices and partly on what he thought was a reasonable basis for various additions, deductions and the delay, arriving at a figure of £8,847.

His solicitors then sent a cheque for that sum to Newton Moor's solicitors, together with a letter stating:

"In these circumstances Mr Charlton has handed to me for despatch to you a cheque for £8,847.00 in full and final settlement of your account concerning work on the property at 44 West End, Sedgefield.

If you are not prepared to accept this payment we have instructions to accept service of any proceedings concerning same. Will you please acknowledge receipt of this letter and cheque."

That letter and cheque were received by Newton Moorís solicitors, and the cheque was paid into Newton Moor's bank. However five days later Newton Moor's solicitors wrote acknowledging receipt of the letter, saying:

"With regard to the cheque for £8,847.00 our Clients are accepting this cheque in part payment."

Having accepted the cheque, Newton Moor issued a writ claiming the balance. In response, Mr Charlton claimed that Newton Moor's acceptance of the cheque constituted accord and satisfaction.

Notwithstanding the relatively small amount of money concerned the matter ended up in the Court of Appeal, where it was held that Newton Moor Construction was not prevented from seeking recovery of the sums which it considered due over and above the £8,847 which it had received from Mr Charlton.

However the reasons given by the two judges were different.

Sir David Cairns considered that there was never an agreement that Newton Moor would accept £8,847 rather than the £18,612 which it considered due, because such an agreement (like any agreement not under seal) would have to be backed by consideration. The judge considered that there was no consideration on the part of Newton Moor because the statement in the letter sent by Charlton's solicitors constituted an admission that the sum of £8,847 was due. Accordingly if Charlton admitted that this sum was due Newton Moor was entitled to receive such a sum, and its subsequent receipt of the cheque could therefore not amount to consideration.

It should be noted that if, as in many similar cases, Charlton had offered the sum in full and final settlement but 'without any admission of liability' Sir David Cairns may well have found that Newton Moor's actions of paying the cheque into its bank constituted an agreement backed by consideration.

The other judge, Eveleigh L.J whilst not commenting on whether the figure of £8,847 constituted consideration, felt that the answer lay in whether the letter, and the acceptance of the cheque indicated that an agreement had been reached. He considered that this was a situation where there may be accord and satisfaction, i.e. a situation where one party is offered and accepts a lower figure in settlement of a higher one claimed, but that on examination of the facts of this matter there was in fact no accord and satisfaction, because the parties were not ad idem. The cheque was not accepted on the basis that it was offered, and this was evidenced by the letter from Newton Moor's solicitors stating that the cheque had been accepted in part payment. Again it should be noted that had Newton Moor's solicitor's not written stating that the cheque had been accepted in part payment there would have been no evidence of the basis upon which Newton Moor had accepted the cheque and in such circumstances Eveleigh L. may well have found that Newton Moor's actions of paying the cheque into its bank constituted acceptance of £8,847 rather the £18,612 claimed.

This case clearly indicates the dangers of accepting cheques sent 'in full and final settlement', particularly if the sender makes it clear that it is sent without admission of liability. Contractors and sub-contractors receiving such cheques should make it entirely clear in writing that their acceptance of the cheque is an acceptance of a part of the payment to which they maintain they are due.