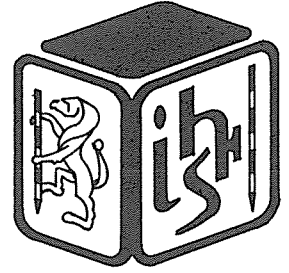


HongKong Building Surveyors



NEWSLETTER

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JUNE

1985

EDITOR'S NOTE

Fellow members, your committee is trying very hard to promote the image of the chartered building surveyors and as a start, we now have a newsletter with an entirely new look. Thanks to Samson Wong and Banjimin Fung for designing the artwork. I hope you won't find the RICS/HKIS logo too 'dice-like'. Our next publicity move will be on the TVB programme 'Good Morning Hong Kong' when building surveyors will talk about illegal structures and other topics of interest. So stay tuned!

This is your newsletter and I would welcome any constructive ideas to improve its content.

ANNUAL GENERAL MEETING

The third Building Surveyors Division Annual General Meeting was held on 1st April 1985 at the Housing Authority Quarters. The meeting was preceded by the AGM of the Building Surveyors Division of the H.K.I.S. Both meetings voted in the following committee for their respective organisations:

YOUR NEW COMMITTEE



Chairman	— Raymond Bates	3-7155058
Vice Chairman	— Lam Chun, Daniel	5-7950777
Hon. Secretary	— Chan Yuk-ming, Raymond	3-638344 Ext. 578
Hon. Treasurer	— Alfred Chung	5-26702237
I. P. Chairman	— Robin Howes	5-26702269
Education/membership	— Wong San, Samson	5-8422616
CPD	— Wong Bay, Peter	3-7130485
Editor/publicity	— Cheng Wai-man, Raymond	3-7501688
Social Convener	— Ng Kai Kai, Sam	5-8932113
Luncheons	— C.C. Tsang, Jacque	5-26702363

RICS BRANCH

David Lee	— Chairman
Raymond Bates	— B.S. Division Representative
Daniel Lam	— B.S. Division Representative

HKIS COUNCIL

Raymond Bates	— B.S. Division Representative
Alfred Chung	— B.S. Division Representative
Daniel Lam	— Hon. Secretary

The outgoing Chairman Robin Howes outlined the concerns facing the profession and the mounting proposed Legislation that could curtail the work prospects of the Chartered Building Surveyor. Incoming Chairman Raymond Bates gave a firm commitment to continuing the CPD programme and social events developed over the past years. In particular he would be placing considerable emphasis on communications, student liaison, increasing the influence of the Chartered Surveyor on Government decision making and promoting the image of the Chartered Surveyor.

A forum on "should a Chartered Building Surveyor expand his professional horizon" followed. Robin Howes, Daniel Lam and CHENG Wai-man spoke and a lively debate followed. The evening was rounded off with a buffet and an open bar. One third of the BS membership attended the AGM, Forum and buffet.

CHAIRMAN'S MESSAGE

by Raymond Bates

It is perhaps appropriate if I outline some of the points I made at the Annual General Meeting. We are a young Division, in fact the Building Surveying Division Committee has only been in existence for three years. Our members are young with by far the majority being members of the JO, our activities must, therefore, reflect this. Although only 30% of our membership is in the Private Sector, it is the Private Sector that will gain in size and stature over the coming years.

Good communications are essential not only between the Branch/Division and members, but more importantly, between members themselves. The newsletter will continue and four issues are planned this year. Increased contact between members will be achieved through CPD events (We are planning one a month), and through a variety of social events and Dim Sum lunches.

I place great emphasis on Education. I intend to improve the liaison with students at the Hong Kong Polytechnic. We need to resolve the lack of training places offered by employers leading to the 'test of professional competence'. We require a degree course leading to a B.Sc. in Building Surveying. It does not take too much imagination to appreciate CPD will be required by all in the not too distant future if they wish to continue practising. I think we are well placed to make this transition.

It is intended to set up a number of technical committees, essential to the crossflow of information. Early subjects will be curtain walling and repair of reinforced concrete.

Over the next few years, the supply of chartered Building Surveyors will be weak. There are a number of proposals to change or introduce legislation which may curtail the activities of Building Surveyors. Your Committee will do its very best to defend your interests. You are our profession, so don't be afraid to extend our influence or publicise our activities. As for your Division events, they are well attended so DO PARTICIPATE.

DIM SUM LUNCH

February saw 55 Chartered Building Surveyors out in force at the Dim Sum lunch. We might be experts in existing buildings but it does not explain why we always get lost each time we look for the function room of the Restaurant in the China Resources Building. We have been there at least twice and we all know it is on the 6th, or was it the 8th floor and that you turn left, or was it right as you come out the lift. I am quite sure that half the people there had stayed there from the previous lunch because they had not found their way out. The other half were from AOM (great to see you all) under the leadership of Taipan Paul and Chief David. C U all at the next 1.

THE NEW BS BOSS

Just 40 years old Raymond Bates first job was as a labourer for a construction firm. At the age of 16 he used to work during the holidays while studying for the RICS examinations at the Brixton School of Building in London (now the Polytechnic of the South Bank). "I was assisting the painters and had the job of Creosoting fences and painting the backs of radiators. I learned that if you polished the floor and cleaned the windows everyone thought the job was very good even if it wasn't."

Raymond spent the first thirteen years of his life in Cyprus before attending boarding school in England. College followed, "I was on the first full time course for Building Surveyors through to final" he recalls. It was during this period that his parents moved to Mauritius where he met his wife Catherine. They married while he was working at the Greater London Council and now have three children. Ian was born in England, Francoise in Gibraltar, and Richard who was born in Hongkong.

In 1970 Raymond moved to Gibraltar where he worked for the PWD as the Maintenance Surveyor. At the age of 26 he found himself with a labour force of some 400. The border with Spain had just closed which had reduced the labour force dramatically. "It was a fascinating time, labour was brought in from Morocco and Portugal and had to be trained. The existing organisation needed re-equipping and work measurement techniques introduced. Maintenance included running a foundry and an electronic workshop, dockyard cranes and road cleansing." he recalls. "I think that initiating a scheme to rehabilitate half the public housing stock, and restoring a 13th century Moorish castle gave me most satisfaction."

Arriving in Hongkong in 1973 Raymond worked with AOM before transferring to the Housing Department where he is Assistant Director/Maintenance. Following years of active interest in community service through the Round Table clubs, his energy is now taken up with the RICS and HKIS. This gives little time to work in his photographic darkroom, although he does find time to play the piano and guitar.

THE WEEKEND TRIP IN SHENZHEN

Peter WONG Bay

12 Chartered Building Surveyors, their girl friends, female bosses, children and some senior family members totalling 31, participated this highly leisurely and enjoyable trip on 1.6.1985. Everyone started with a warm up exercise in securing a seat in the train. The weather was unexpectedly fine comparing with the heavy downpour the night before. The group was led by James Law and a lady guide from the East Lake Hotel. Started with a tour around Shenzhenshi, the group saw a huge number of

construction sites at various development stages:- government buildings, hospitals, gymnasium, quarters, hotels, restaurants, shops and some private developments.

The morning was spent at Shenzhen Bay Park where surveyors and their kids enjoyed the slowest Big Wheel, the shortest mountain train, the biggest spring bed and the most exciting octopus. This was followed by a coach tour to Shekou Industrial Area. Here the group also seized a scarce opportunity in attending the exhibition of Terracotta Warriors and horses from the mausoleum of Qin Shi Huang. Other rare cultural relics from Shannxi was also exhibited.

Lunch was at Nam Shan Tsui Hang Village where seafood was served. The afternoon schedule was tight and time was shared among visiting the Xili Reservoir and Xiangmiho Holiday camps. Members spent most of their time shooting, riding, boating, roller skating, racing, motor cycling and shopping. Singing while travelling on the coach was most entertaining and had generated a lot of fun in particular James' 'Shanghai Beach' and Patrick's 'My Way'.

The evening was spent at East Lake Hotel which was designed in a combination of eastern and western styles, with a big garden built in traditional Chinese landscapes. A variety of indoor and outdoor activities were available. Again surveyors maximised their usage of these facilities by tight scheduling and programme monitoring techniques. Some went to Shenzhenshi Food Street at midnight but struggled hard in getting their cold beer.

The following morning, the group visited the Shenzhen Reservoir Park and the Shenzhen Reservoir from where two-thirds of the water demand in Hong Kong are supplied. Thanks to James who has made this a highly successful and enjoyable event! (Editor:- and he should be suitably rewarded by arranging another tour!?)

THE CHAIRMANS REPORT 1984/5

by Robin Howes

This year professionally has brought me into contact with a lot of interesting people within our field and I would like tonight to pass on to you some of the information gleaned from them and my own interpretation of that information.

This coming year sees the introduction of two major pieces of legislation. Firstly, in the U.K. there will be the 1985 Building Regulations and secondly here we have the revised Building Construction Regulations.

The point in the former which I wish to mention this evening is the creation of the roles of Approved person and Approved inspector. These people will implement the new prescription clauses, themselves a major innovation.

The Approved person's function is certification of the structural design for the approved inspector or the Local Authority, and the approved inspector's function is certification of the design and site work, taking on all the responsibilities now carried out by the Local Authority, but not certifying the structural design unless also an approved person.

We as Building Surveyors can not become Approved Persons as this is solely the field for I Struct E and ICE, but we can become Approved inspectors. For this you need 10 years experience, a minimum age, a wide experience in building practice, knowledge of the Building Regulations and statutory longterm insurance cover. It is still not known here if you can qualify being overseas? So anybody thinking of practising in the U.K. must make preparations well in advance, especially, I think, in regard to the approved documentation. In this respect, I understand, that the London Constuctional Bylaws will die with the break up of the G.L.C. So for those people who are only familiar with the London Regs. new knowledge will have to be acquired. How many professionals will be in the job market with the breaking up of the Greater London Council and the winding down of other Authorities Building Control Branches with the introduction of certification, is not known.

Locally the new Construction Regs. hold many interesting points but the main ones which should interest Building Surveyors are

- updating law regarding provision of walls
- a new set of regulations relating to curtain walls
- testing of curtain walls
- an expanded section on fire

In the past Building Surveyors have, I think, considered the Construction Regs as the province of the Engineer; this will not be the case in future.

For those of you qualified since 1981 and any of you who read the Newsletter from cover to cover the subject of C.P.D. is not new; however for those of you who are unfamiliar with the term, it means Continuing Professional Development. It is my understanding that within 2 years, all R.I.C.S. members, of whatever age and whenever qualified might be called upon to produce documentation of having done 30 hours a year of qualifying activities. I would suggest that all members familiarise themselves with what constitutes "qualifying activities." as the branch can not necessarily give the 30/year. As an aside, it will be interesting to see if prospective employers wish to see C.P.D. records at job interviews.

Switching to another topic but returning to the local Construction Regulations, there is a new one relating to a proposed site supervision clause. The proposal is that only an Engineer can do a structural design and thereafter only an engineer can carry out the required site supervision. This of course cuts at the heart of what a B.S. is trained to do, the design of small buildings and alterations and additions. Your committee is at present fighting this proposal as it is continuing to fight the proposed Architects Ordinance, which as you know, if implemented, will also bar Building Surveyors from design.

Building Surveyors in U.K. have enjoyed an era of enviable prosperity since the time of comprehensive redevelopment of the '60 s. Refurbishment and rehabilitation are major fields together with urban conservation; also the increase in home ownership has meant more small scale survey work. There is also at present a growing understanding of the concept of maintenance and

that the B.S. has to be involved from the outset. Coupled with this it makes sense for him to be involved with the nature and performance of materials, quality of detailing and standard of service. If these trends take off here there will be major scope for B.S. in these fields.

That is, if people know what a surveyor is. Few of the people who will matter to us in the mentioned fields, know what a Building Surveyor has to offer. To succeed we must adopt an aggressive posture regarding our own promotion by public relations and advertising. . . .selling our skills to the public.

This cannot be done individually but must come from the Building Surveyors Division as a whole and also from the Main Branch.

The wide range of topics I have covered so far probably seem relatively unrelated so I will now come to the point:-

Times are changing

the law is changing

the BS must be aware of these things early or he will miss out.

CPD is coming and the BS will have to take an active interest; he will not be able to qualify and then just sit back to earn a lifetime's money without further reference to ongoing education. Other professions are fighting to get a bigger share of our sphere of work, we must combat this and promote ourselves.

All these things the Institution can and must do but the Institution is made up of individuals, so my message tonight is that the B.S. must actively educate himself and others and must take an increasing active role in the Institution, whether it be R.I.C.S. or H.K.I.S. or he will individually suffer and we will become collectively impotent.

BUILDING SURVEYORS as AUTHORIZED PERSONS

A summary of the talk given to the BS Division on 14th September 1984 by Mr. H.K. Chung, FRICS, FIAS, FHKIS, ACI Arb, MBIM, M.Soc.Sc.(Pub. Admin.)

Introduction

Authorized Persons under the Buildings Ordinance are those architects, civil, municipal or structural engineers, or surveyors, so authorized to perform certain statutory functions thereunder. The Authorized Person and the Building Authority are the two major statutory actors under the Buildings Ordinance administering statutory building control, the former ensuring compliance and the latter taking care of enforcement.

Authorized Architects in history

When Hong Kong was still in its infancy, under the Buildings and Nuisances Ordinance 1856, any person needed only give 4 days' notice of commencement and he could proceed with his building work. It was the Surveyor General's duties to make sure that the work complied with the nominal standards laid down in the Ordinance. By virtue of the Buildings Ordinance 1889, wherein the British constructional bye-laws were adopted for local use, apart from giving 4 days' notice of commencement, a building owner was required to submit plans. It however remained the duties of the Surveyor General to approve the plans, to inspect the works, and to certify compliance before a new building was occupied.

It was under the Public Health and Buildings Ordinance 1903 that the statutory actor, then known as an Authorized Architect, was introduced. Constructional and planning standards were much expanded. Building activities then had increased to cope with the rapid growth in population. In order to ensure adequate building control, a building owner was required to appoint an Authorized Architect to prepare and submit plans to the Building Authority for approval, and to ensure that the building work was carried out in accordance with the approved plans and in compliance with the Ordinance. The administration of statutory building control began to be shared by the two actors — the Authorized Architect and the Building Authority.

In the beginning, Authorized Architects were such architects, engineers, or other persons, as the Governor in Council may deem qualified to perform the duties of an Authorized Architect, including the Director of Public Works and other officers of the Public Works Department as the Governor in Council may think fit. They dealt with all building and engineering matters under the Ordinance and they were also authorized to act as arbitrators or umpires in disputes between building owners and adjoining owners.

This system was carried forward by the Buildings Ordinance 1935 and then by the Buildings Ordinance 1955. Under these Ordinances, specific references were made for the Authorized Architect to supervise building works and to certify that the work complied with the Ordinance and was structurally safe.

Authorized Persons today

By virtue of the Buildings (Amendment) Ordinance 1974, Authorized Architects were changed to Authorized Persons, and Registered Structural Engineers were introduced to deal with more advanced structural engineering matters.

Nowadays, an Authorized Person is a co-ordinator of building works whose duties are to supervise the carrying out of the work by giving periodic supervision and making inspections as necessary to ensure that the work complies with the Ordinance, accords with the approved plans, and satisfies any order made or condition imposed; to notify the Building Authority of any contravention of the Regulations resulting from the work; and to generally comply with the Ordinance.

In order to operate fully under the Buildings Ordinance, it is incumbent upon any professional to register as an Authorized Person. Any corporate member of the RICS having practical experience relative to building construction since election is eligible to become an Authorized Person. The procedure is that his application on Form 1 should be submitted to the Technical Secretary of the Buildings Ordinance Office, together with proof of his qualifications and evidence of his experience. After a professional interview, if he is found suitable, his name will be included in the Register, which will be announced in the Gazette.

Registered Surveyors (?) in future

Among the 738 names presently on the Authorized Persons' Register, only 3.12% are surveyors. If Chartered Surveyors are to better establish themselves in Hong Kong, they should seriously consider entering into the arena of Authorized Persons and making their service known to the general public. Promotion pamphlets explaining when and why one needs the service of a Building Surveyor should be freely distributed to owners and tenants so that whenever they want to do something with their property, or whenever there is any dispute or litigation arising therefrom, they may approach the appropriate profession. To demonstrate by deeds being always better than words, Building Surveyors could operate some kind of a voluntary service to the public: to offer advice on building related matters, to help solve building problems, and to arbitrate disputes, etc.

The status of the building surveying profession would be greatly enhanced if it is facilitated by statutory authorization. In this highly sophisticated technological society, when every professional discipline is going for specialisation with a view to monopolizing its activities, Chartered Surveyors should be aiming at certain monopoly. While there are already Registered Structural Engineers and there may be Registered Building Services Engineers, we could strategically, without prejudice to the Surveyors, assist the Architects to become Registered Architects, who would monopolize architectural designs for, say, buildings over a certain size, or special and complicated buildings, or landscaping, etc. The role of the Authorized Person could then be reserved more to the Surveyors, or totally transferred to Registered Surveyors. To further foster the surveying profession, a compulsory Surveyor's Report could be introduced in all building conveyance, to ensure a fair basis for bargaining; and a Surveyor Enforcement clause could also be introduced in all Deeds of Mutual Covenant, to ensure proper and professional administration, management and enforcement.

Conclusion

If Chartered Surveyors really want a fairer share in building development in Hong Kong, it is urged that the RICS (Hong Kong Branch) and the HKIS seriously consider ways and means to promote the public image of the surveying profession and to strategically seek better and appropriate statutory recognition. It is believed that, with enhanced status, Chartered Building Surveyors may render their expertise to the betterment of the local habitat and to help build a better Hong Kong.

REPAIR OF REINFORCED CONCRETE BUILDINGS

by Vick Davey

I have the pleasure and honour to address fellow professionals and I am grateful for the opportunity to speak on a subject of importance to building in Hong Kong. Before discussing the cures, I would like to review the possible maladies.

Causes of Damage

Damage to reinforced concrete in service may be effected by fire, settlement (either vertical or lateral) of foundations, explosion, chemical attack, overload, excessive vibration, corrosion, or, prior to occupation, the cause may be poor design, poor detailing or poor construction, involving either poor workmanship or substandard materials.

Probably, the most prevalent in Hong Kong and causing annual expenditures of millions of dollars - yet not usually considered newsworthy - is corrosion damage due to rusting of the reinforcement attributable to a number of varying factors such as chloride-laden aggregates, use of seawater for concrete mixing or by concrete cover being inadequate in either quality or quantity.

Each separate cause can have different effects on the structures although there may be overlapping similarities between cases. It is always important to identify the source and remove it, so that the repair does not have to be repeated frequently. One possible exception to this rule is where a building has a limited service life remaining due to obsolescence or proposed redevelopment when a lower standard of repair may be acceptable if a commitment to close surveillance is undertaken for the remaining service life.

Recognition

The great amount of experience here will recognise advanced corrosion and by considering the quality and thickness of concrete cover chloride contamination may be suspected. This can be verified by laboratory tests. However, there is a divide of opinion on what to do if chloride content exceeds the limit prescribed by, for instance, CP110. My own view is that such codes are very conservative - as rightly behoves a manual of good practice concerning prospective new buildings but I consider the treatment of an aged domestic building merits a more lenient outlook. Experience only can determine the balance of low cost repair against the high cost surveillance that should go well beyond the completion of such a repair.

Early stages of corrosion can be confused with stress cracking which may involve overload, vibration, settlement, or concept defects (design, detail, construct errors). Usually an interpretation of the overall pattern of cracking in the complete building will help to isolate the particular cause or causes - and often more than one cause is present. Additionally, it is helpful to interview

personnel involved in the use of the building. Overload - which may not be present at the initial inspection - may thus be identified. A review of the original designs and details can locate concept defects and investigation, by opening the concrete members and inspecting and/or sampling & testing of reinforcement and concrete can help in determining the cause in addition to demonstrating the extent of repair/demolition and rebuilding that is necessary. In severe cases, temporary shoring and/or restricted use or complete closure may be a necessary preface to remedial work. In all cases, the cause should be identified and removed, clearly with fire damage this happens but with ground movements although the initial cause is removed e.g. an adjoining deep excavation is filled in time should be allowed for 'shake down' before repairing.

Preparation Work

Generally where loose concrete is present e.g. fire damage or corrosion, it must be removed and if additional reinforcement is required, it may be necessary to remove good concrete to facilitate anchorage. In cases of chloride contaminated concrete, efforts should be made to clear such concrete from existing reinforcement at damage sites so that ultimately clean concrete protects existing and new reinforcement. Needless to say, all new materials should be suitably clean and good quality control exercised throughout, fire damaged concrete warrants an additional note as the extreme heat may have damaged the chemical and physical structure of concrete without having disrupted it. Careful examination is necessary as fire degraded concrete is very porous and offers little protection against reinforcement corrosion.

Repairs

Repairs comprise of two basic modes, reinstatement of the original structure or strengthening by external means (in effect, however, it is disguised, permanent shoring). Strictly there is a third alternative which is to permanently restrict the extent and/or nature of usage - A well recognised example is weight restriction for vehicles using a weakened bridge. A factory originally for heavy engineering may be confined to light engineering. Difficulties of enforcement may preclude this option, or indeed the restriction may be so prohibitive as not to be viable.

The most common mode of repair is the conventional R.C. repair. After suitable cleaning away of rust, loose concrete and other foreign material, additional reinforcement as necessary is secured by splitting or welding, and the new concrete (using a small size aggregate, possibly 6 — 10 mm. max) is placed either into a form or by a plastering technique. Mixing, compaction & curing are important quality control features. Pretreatment is usually a personal choice, it may be elaborate or a simple splashing of water on the surface of etg. concrete to inhibit migration of water from the fresh concrete is found to be adequate.

An alternative method where the size of repair merits it is gun-fired concrete. It has the merit that plant and stocks may be remote from the damage site of only pipe work is carried into the working area. Special precautions are necessary to ensure adequate concrete cover to reinforcement. Tests for compressive strength if required can be made on samples cut by diamond saw from a sprayed sheet built up near the work in hand. Other useful tests are Schmidt rebound hammer, covermeter, uridsor probe, and coring of the work insitu.

For cracks through R.C. members that, for various reasons need to be sealed, pressure grouting is available using cement, resin, latex or other grouts. The crack width and service conditions may dictate the grout material — some grouts are not tolerable of wet or chemical presences, or may not offer suitable fire protection periods. The technique is to initially seal the exterior face of the cracked beam to contain the injected grout. Injection tubes are installed at intervals and grout applied by pressure to progressively fill the crack. Possible hazards are:- defective material — the unopened pot of epoxy has a limited shelf life which is further reduced after opening, material degraded by storage conditions, incorrect mix proportions with two-part resins, and incomplete injection due to low pump pressure or high viscosity. Testing by ultrasonic pulse equipment or small dia core drilling and subsequent core examination can help in assessing a success rating where doubt exists.

Now, it may not be possible to uprate a structural member by internal repair and the alternative of external supports or anchors needs to be considered. In the simplest case, a split may be spliced to a defective part. At the other extremen, a multi-storey factory may be inundated with additional beams, columns, bracket, slab frames and even additional foundation piles to provide improved or alternative load paths. Needless to say, access problems could on this scale render the cure worse than the disease. Each case though has to be assessed on merit and a suitable support system designed and installed. Common problems are difficulties of bonding the new system to the old, ensuring the new support is itself adequately supported or anchored, and ensuring that the actual distribution of total loads between new and old work is acceptable and achievable, and not least instilling into everyone involved that quality control is at least as important as if a new building was being constructed.

Typical examples of design would be r.c. collar and bracket round an exg. column to effectively shorten a defective beam, a steel beam strapped under an etg. beam, rock or soil anchors though a defective retaining wall. Techniques of installation are generally akin to new building work except that usually a gap is left deliberately between upper (exg) member and the lower (new) member to be infilled with a non shrinking material e.g. semi-dry mortar to ensure load transfer. Testing controls available are the usual non-destructive tests through to a full scale load test on the complete structure (not always welcomed for same reason!)

Summary

For any repair case, the sequence is to identify the cause, remove or abate it, prepare a detailed design to overcome the specific weakness and before construction, consider the need for continued monitoring after repair completion. This will depend, inter alia, on the repair method, whether or not it is a proven technique or by nature nebulous as to its efficacy or continued effectiveness, and whether the analysis of the cause, or indeed its successful eliminations, is somewhat uncertain. Although techniques may be common practice, each case is addressed on merit and professional judgement exercised throughout.

I would like to acknowledge the contribution of Mr S.W.G. Holroyd, who has spent many years in the dangerous buildings section of H.K. before his recent retirement, in helping to guide the discussion following the paper.

RICS/HKIS BUILDING SURVEYORS DIARY

	CPD/EDUCATION	DIM SUM	SOCIAL	NEWSLETTER	BRANCH/DIVISION
JUNE	Podium Decks (27/6)		1 – Shenzhen 22 – dragon boat	Issue	15 – Carlesburg visit
JULY	Daido Pile visit (27/7)	Lunch (19/7)			
AUGUST	Seminar for TPC syllabus (9/8)		Ocean Park (Water world) (16/8 evening)		
SEPT.	Illegal Structures (27/9)			Issue	
OCT.	Building Maintenance in Australia (25/10)	Lunch (18/10)			
NOV.	Kwai Fong Project (30/11)		Race Meeting (evening)		HKIS annual dinner
DEC.	Compensation Claims (18/12)			Issue	
JAN.	Foundation design/ geotechnical problems (31/1)	Lunch (17/1)			
FEB.	Maintenance Management TUTORIALS (28/2)				
MAR.	Paint Manufacture visit (29/4)	Lunch (2/4)		Issue	RICS annual dinner (4/3)
APR.	HD Computers (25/4)	AGM			

COLLIER PETTY BUILDING SURVEYING IN HONG KONG.

Collier Petty's Building Surveying and Project Management Division have the professional skills and experience to handle a wide range of projects to your satisfaction.

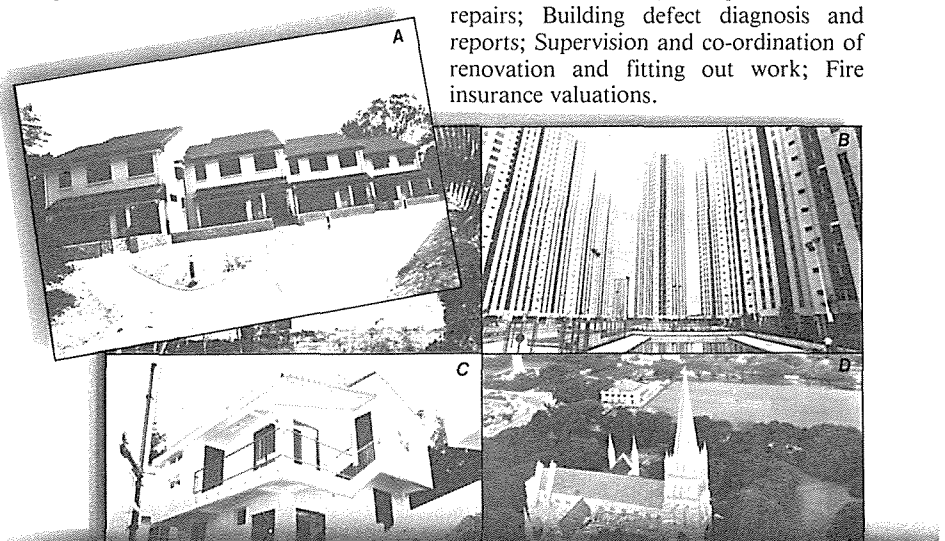
From development monitoring of Richland Gardens — 5,900 units in a HK\$600 million P.S.P.S. development at Kowloon Bay — to multi-storey commercial blocks in Tsimshatsui. From project management of holiday homes on Cheung Chau to supervising renovation of existing structures. Government, banks and financial institutions, private developers, owners and tenants have put their trust in the professionals at Collier Petty.

Our experience also extends to Singapore where we are involved in the survey of buildings along the entire route of the Mass Transit System.

If our professionalism will solve your problems, why not contact us. You'll find we measure up to your needs.

Collier Petty provided design and project co-ordination for the new Royal Hong Kong Golf Club senior staff quarters at Fanling which were recently completed.

Development monitoring; Project management; Preparation of plans and specifications; Alterations and improvements; Structural and condition surveys; Schedules of condition, dilapidation and repairs; Building defect diagnosis and reports; Supervision and co-ordination of renovation and fitting out work; Fire insurance valuations.



- Illustrated at right:
- A. R.H.K.G.C. Senior Staff Quarters
 - B. Richland Gardens — Development Monitoring
 - C. H.K. Telephone Co. Holiday Homes Cheung Chau — Project Management
 - D. St. Andrew's Cathedral Singapore — M.R.T. Survey.



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