

Diagnosis and Repair of Water Seepage (Part 2 of 3)

Methodology of Diagnosis



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DIFFERENT SOURCES OF SEEPAGE

Different causes of ceiling seepage warrant different repair methods. Before the repair works are ordered, it is of

paramount importance to properly diagnose the root cause(s) of the water seepage and rectify the source of a leak. The table below summarizes the possible sources of seepage and their associated symptoms.

Source of Leakage	Seepage Symptoms
A. Soil/Waste Pipes	<ul style="list-style-type: none"> Dampness is evidently not related to inclement weather. Dampness is intermittent with dry and wet irregular cycles. For serious cases, intermittent water dripping may occur. The appearance of dampness is evident. An odour may be present in the affected area. Dampness is often found near penetrations through slabs or near pipe ducts.
B. Rainwater Down Pipes	<ul style="list-style-type: none"> Dampness is evidently related to inclement weather. Exposed or concealed rainwater down pipe(s) is present in the vicinity of the affected area.
C. Floor Slabs (Toilet/Balcony)	<ul style="list-style-type: none"> The affected areas are likely to have a bathtub above. The affected areas are likely to be around pipe penetrations or floor drains. The ceiling seepage area may be close to the sanitary fitments above. Dampness is evidently not related to inclement weather. For serious cases, intermittent water dripping may occur.
D. Water Supply Pipes	<ul style="list-style-type: none"> The appearance of seepage persistently exists. The intensity of the seepage increases with time and shows no sign of improvement. For serious cases, water dripping persists. Seepage is evidently not related to inclement weather. Seepage is often associated with an embedded pipe design.
E. Rainwater	<ul style="list-style-type: none"> Dampness is evidently related to inclement weather. Affected areas are mainly external walls (including light well areas), roofs, and the soffit of the podium floor. Ceiling damp patches arise from the expansion joints above. The vicinity of any window is a vulnerable area.
F. Condensation	<ul style="list-style-type: none"> Condensation will generally occur between compartments with great temperature differences when humidity is high and ventilation is poor. Condensation may occur on the side with the higher temperature. For local floor dampness near the window, check for the operation of the A/C unit on the flat below to see if the air outlet is directed towards the ceiling.

PROCESS OF DIAGNOSIS

In order to identify the possible causes of seepage, the following sequence of diagnoses could be adopted and the findings should be properly recorded:

1. Preliminary Checks

Preliminary checks must be carried out before any on-site inspection. They include, but are not limited to, the retrieval of the repair history of and related complaints about the subject premises for analysis.

2. Site Visits

Site visits have to be conducted as follows:

- Visually inspecting the affected areas to verify the severity of the seepage problem.
- Inquiring with the complainant to obtain any related information regarding seepage (e.g. frequency, duration, and timing).
- Using diagnostic equipment, as detailed in Paragraph (3) below to assist in the location of the root source(s) of the seepage.
- Visiting flats on the higher levels to make further judgment/diagnosis and to identify if there is any leaking pipe/fittings
- Noting any other elements (e.g. window, walls) or factors that could have caused the seepage.

3. Using Diagnostic Equipment/Instruments

Always use diagnostic equipment/instruments to collect objective data/evidence for the identification/confirmation of the source(s) of water seepage. Equipment/instruments to be employed include, but are not limited to:

- A non-pin mode Moisture Meter (the basic diagnostic tool) and a pin-type meter (a supplementary tool);
- colour dye, including fluorescent dye testing when necessary; and
- a pressure gauge (to detect leakage from concealed water supply pipes).

METHODOLOGY OF DIAGNOSIS

Generally speaking, all suspected or visually damp/problematic surfaces should be measured with moisture

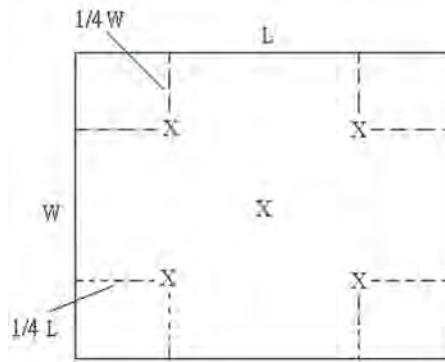
meters to confirm if there is abnormal dampness present. Measurements should be done in different locations within the flats so that the data from the normal and problematic locations can be compared. More intensive and concentrated measurements should be carried out in the affected ceilings or walls. A systematic approach, detailed diagrammatically below, should be adopted for measurement and all measurements should be recorded in a standard proforma and plan.

1. Use the standard proforma to record all necessary details like property name, block name, flat number, date of inspection, weather conditions (in particular R.H.), previous repair methods, and affected locations in the complainant's flat.

2. Examine the service area ceilings (including the toilet, balcony, kitchen, etc.) and other reported seepage areas by visual inspection, followed by moisture meter readings.

3. Initial Measurements

Take one reading in the middle of the living room and in another area that have not suffered seepage and take five readings in affected areas like the bathroom.



Remark 1: Use a floor plan to represent the ceiling plan underneath such that the locations of the WC and external walls could be identified.

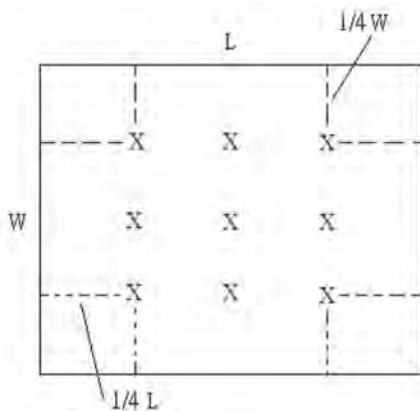
Remark 2: "L" stands for the length and "W" stands for the width of the ceiling. "X" indicates the location of the measurements.

- If the readings are in order, no further action is required.
- If the readings suggest a potential problem, go to Step 4.

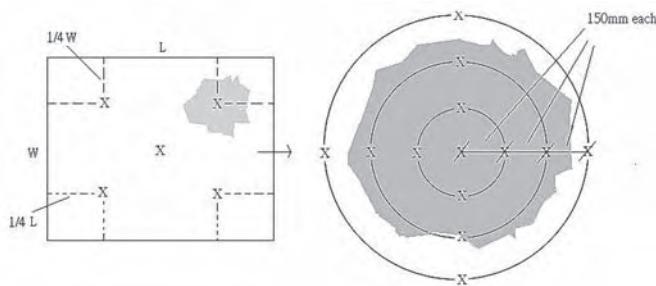
4. Detailed Measurements

If there is visual seepage or Step 3 (ii) suggests there is seepage, take readings as follows:

- (i) General and extensive ceiling seepage – nine measurement points (including the five points from Step 3) should be spaced as follows:



- (ii) Local seepage signs – five measurement points in Step 3 with concentrated measuring points in circles in the seepage area as follows:

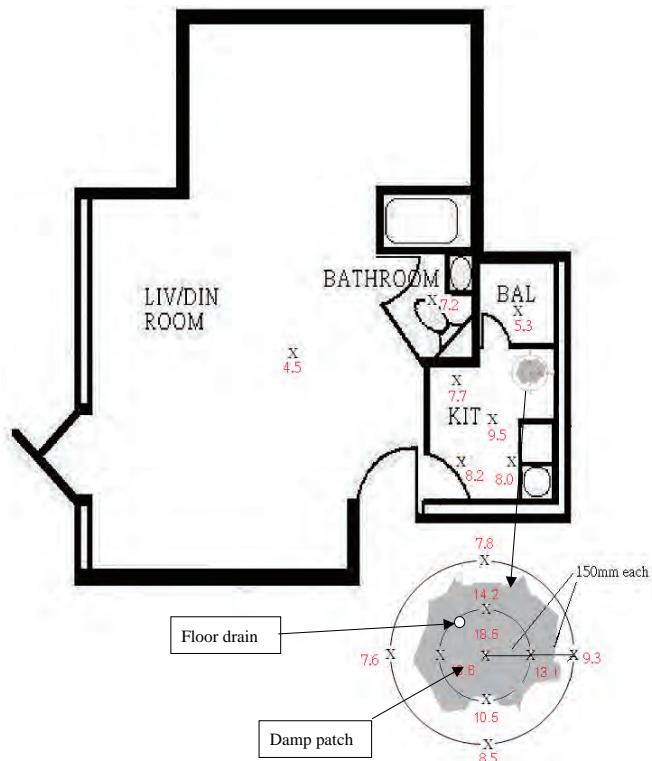


Note: In the centre of the seepage, measure one point. For all circles, measure four points with the outermost circle covering the whole damp patch, or else readings will fall below the suspected level.

5. Mark any penetration on the floor (ceiling) plan (floor drains, soil and waste pipes, vent pipes, etc.), as well as the approximate sizes and locations of the obvious affected areas.
6. Visit the flat above (if accessible) to see if any irregularity is present.
7. Take photos of the affected areas (if seepage is confirmed) of both the upper and lower flats upon the agreement of the tenants of each flat.

8. Diagnosis of the source of any seepage in the proforma:
(a) Under the bathtub, (b) around the pipe penetration, (c) around the floor drain, (d) in the WC pan anchor fixing, or (e) a general failure.

SAMPLE MEASUREMENT



Remarks:

- (i) The floor plan is used to represent the ceiling plan below.
- (ii) All measurement points with readings should be marked on the plan.
- (iii) Readings that indicate mild (13-17.9), medium (18-22), and serious (>22) seepage vary from meter to meter, so the above readings are for illustration purposes only.

CONCLUSION

Observations from the above sample measurement presumed the following:

1. All rooms are air dry except the kitchen.
2. There is a localised seepage area inside the kitchen.
3. The damp patch has a diameter of about 400-500mm.
4. The seepage is likely associated with a defective floor drain or its surroundings.

Expert Opinion – an Independent or Biased View ? (Part 2)



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Will the Problem of Bias be resolved?

In my last article, I have analyzed what the Courts had done to exercise greater control on the use of expert evidence. With the new rules stating clearly the Court's requirements on expert witnesses, I trust that the number of experts acting as advocates would be reduced. However, this will not resolve the problem of bias once and for all. In practice, if expert witnesses are engaged at an early stage, they tend to assume dual roles: an independent expert witness role and a litigation team member role. This is often the case in major litigation and arbitration cases in which expert witnesses play a significant role in helping counsels frame their cases, advise on what documents should be discovered, assist the factual witnesses in refreshing their memories of certain technical areas, and advise on the merits of the case. Therefore, it is inevitable that expert witness reports will contain opinions argued on behalf of their clients. During the trial, it is logical to expect that they would defend like advocates under cross-examination.

Under the adversarial system, each party is responsible for preparing and presenting its case materials, and it is certain to select those materials that appear to support its case. Each party relies on its counsel to expose the weaknesses of the other side's evidence through cross-examination. Therefore, it would be natural that the evidence is selected on the basis of what will help the hiring party to win rather than if it would help the Court to determine what is right. Unlike lawyers, expert witnesses are not subject to the supervision of the Court in their professional activities.

Means to assess the objectivity of the partisan experts and ways to enforce it

At the moment, the two sanctions open to the trial judge are for him/her to give no weight to the report or to openly criticise the expert's work, especially if bias is apparent. But the perception of bias is a subjective exercise, and judges will sometimes err on an expert witness impartiality. For example, it is difficult to distinguish between an expert

witness who acts as an advocate for his/her client and one who persuasively provides opinionated evidence that appears to be solely to support his/her client's case. Hence, people in the field do not often take the criticisms that judges have for expert witnesses seriously. As long as the expert witnesses serve the interests of their clients, they will be retained by their clients for other cases irrespective of the results of past cases and the problem of bias is still there.

There are different schools of thought as to how much this practice needs to be regulated. One suggestion is to refer the alleged offender to his/her professional institution for disciplinary action (*Pearce v Ove Partnership, Ltd.* [2001]¹), while the other is to encourage stakeholders to prepare Codes of Conduct to regulate the conduct of their members.² The difficulty in practice is how to ensure that the bad apple's actions are kept in check, as s/he does not need to be member of any regulated body to earn his/her paycheck so long as his/her evidence is accepted by the Court as expert evidence.

Court-appointed experts as a way out?

In Australia, both parties have the option to apply to the Court for an order to appoint a Court expert to inquire into and report on any matter relevant to any question that arises during the proceedings (FCR, Part 23.1). The Court gives instructions for the inquiry and reports on and fixes the expert's remuneration. The obvious advantage of a Court-appointed expert is that it more likely ensures objectivity and reduces the total litigation costs by preventing a battle of experts. Also, a Court report to each party early in their dispute is more likely to bring about an earlier resolution, which is in line with the underlying objectives of the CJR (RHC O.1A, r.1).

¹ *Pearce v Ove Partnership, Ltd.* [2001] EWHC Ch 455, in which Jacobs J considered it necessary to refer the expert witness' conduct to his architects' professional body, RIBA.

² For example, The Academy of Expert Witness in the UK.

At the moment, there is no similar provision in Hong Kong. I think the likely argument against a Court-appointed expert system here is the alleged interference of the parties right to present their own cases and call for witnesses of their choosing to support their cases, which they enjoy under the current adversarial system. Lord Denning in *Re Saxton (deceased)* [1962] 1 WLR 968 at 972 said that:

There is fear that the Court might attach great weight to the evidence of the Court-appointed expert and the litigants are reluctant to leave the decision of the case so much to his hands. If his report is against one side, that side will wish to call its own expert to contradict him, and then the other side will wish to call one too. So it would only mean that the parties would call their own experts as well. In the circumstances, there will not be any savings as alleged.

This is even more apparent in cases in which there is more than one accepted expert opinion, as Court-appointed experts may not be able to deal with such situations to the satisfaction of all parties.

Conclusion

The common aim of the expert witness reforms in the various

common law systems is to clearly and formally establish in the Court Rules that experts have an overriding duty to the Court rather than to those who instruct them or pay their bills. The message is that Courts expect experts to be completely impartial and objective in making their reports and not act as advocates for their clients.

However, the effects of these changes have yet to manifest themselves. I believe the ultimate goals are to procedurally refine the role of experts as the courts desire (i.e., as independent, impartial, and objective witnesses rather than as advocates for a party) and, in the long run, to introduce appropriate Codes of Conduct with sanctions and Court-appointed experts for non-contentious matters and low value cases.

Finally, when faced with a choice of opinions between two competing experts, my experience tells me that the Court is likely to believe the one who is thorough and dedicated to his/her task; whose evidence conforms to the Court Rules; and whose demeanour, qualifications, and relevant experience speak louder than how well s/he advocates for his/her client.

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Interpretation of Construction Contracts: No New Thing under the Sun (Part I)



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A recent article

An interesting article was published in two parts in the December 2011 and January 2012 issues of *Surveyors Times*. The article discussed the different approaches to interpreting waiver provisions purporting to remove the Contractor's right to direct loss and expense ("L&E") for delay under contract and damages in law.

Mr Hon Chi Yi, Ludwig ("Mr Hon"), its author, started with a review of the recent High Court case of *Brington Engineering Ltd v Cheerise Asia Ltd*, HCCT 2/2011, which was a decision of Deputy High Court Judge Cheng, SC. He then offered his opinion on a 'real' case he was involved in and in which the Contractor relied on Brington in an attempt to circumvent a similarly worded waiver provision.

The Brington Case

It is true that there was a waiver provision in *Brington* purporting to exclude the sub-contractor's right to L&E for the first 120 days of the EOT, but there was no argument by counsel over this point. The reason was obvious: even if the sub-contractor's claim for 74 days of EOT had been wholly successful – which was not in the judge's findings – there still would not have been any prospect of L&E because of the 120-day waiver period.

I have been unable to derive from *Brington* any general guidance on how such waiver provisions should be interpreted. If *Brington* had decided on anything of at least some value to the construction industry, it would be its approval of the generally-held view that the expression "back to back" does not have a legally defined meaning. Like a chameleon, it changes its colour to suit its background.

The question of interpretation raised in Mr Hon's article

The theme of Mr Hon's article is the interpretation of this specific waiver provision, which, he said, arose from a real case:

SCC-20(6)(4) The Main Contractor also hereby

irrevocably waives any right to direct loss and/or expense and any other claims (including claims for damages) arising from any circumstances for the first 90 calendar days of extension of time granted by the Project Manager... (Mr Hon's underlining).

The real case concerned a renovation contract that was set for completion on 4 January 2011. An EOT of 61 days was granted on the account of inclement weather, which thereby extended the completion date to 5 March 2011.

According to Mr Hon, what divided the Contractor and the Architect is this simple question:

Should "the first 90 days" in SCC-20(6)(4) begin to run from 5 January 2011, or 6 March 2011?

The Contractor argued for 5 January 2011; while the Architect wanted 6 March 2011.

The practical difference between these two interpretations, of course, is that according to the Contractor, he merely undertook to waive any L&E entitlement he might have had (including any right to common law damages) for the first 90 days of the EOT, whether or not such an EOT included an entitlement to L&E, whereas the Architect took the Contractor to have agreed to waive the first 90 days of the EOT with an L&E entitlement.

Mr Hon supports the Architect's interpretation. I belong to the opposite camp.

Paraphrasing the question

I think the debate could be much simpler if I paraphrase Mr Hon's question in this way:

Do the words, "the first 90 calendar days for extension of time granted" include both the entitling events (by which I mean events with an L&E entitlement) and the neutral events (events such as inclement weather, which provide no L&E entitlement) or the entitling events only?

Mr Hon's opinion

Mr Hon, who identified himself "as the in-house QS consultant for the Architectural firm," asked readers to consider which of the two rival interpretations was correct. He found the Architect's interpretation "more reasonable and contractually correct" for the following reasons (which are quoted verbatim):

In construing the original intent of this clause (SCC-20(6)(4)), it was clearly that the Employer who wants the Main Contractor to agree to waive the 1st 90 days of loss and/or expenses, for those EOT days that entitling associated loss and/or expense (emphasis mine).

- *It was totally unreasonable and absurd that if the 1st 90 days commenced from 5.1.2011, the first 61 days of granting of EOT due to inclement weather, they were all originally did not entitle to any loss and/or expense, i.e., Monetary no cost effect! In this way, only the (90 – 61) = 29 days loss and/or expenses were eventually forfeited by the Main Contractor.*
- *In this way, I am in the opinion that, the 1st 90 days should be commenced and applied to those days that MUST have entitling of loss and/or expenses so as to meet the originally intent of this SCC clause.*

The author's opinion

I am unable to discern, from the material provided, "the original intent" of SCC-20(6)(4) to the effect that the Employer "wants the Main Contractor to agree to waive the 1st 90 days of loss and/or expenses." But, more importantly, I see no useful purpose to be gained from determining the Employer's "subjective" intention.

The principles by which a contract document or statement should be interpreted are well-settled and summarized by the House of Lords in Investors Compensation Scheme Ltd v West Bromwich Building Society [1998], 1 WLR 896, 912-913. The ultimate objective of interpretation is to find out what a reasonable person in the position of the parties would understand the disputed document or statement to mean (Lord Hofmann's famous first statement of principle):

Interpretation is the ascertainment of the meaning which the document would convey to a reasonable person having all the background knowledge which would reasonably have been available to the parties in the situation in which they were at the time of the contract.

As "*the in-house QS consultant for the Architect*," Mr Hon might have been privy to what the Employer intended SCC-20(6)(4) to achieve, but a reasonable outside observer would not. A party's "subjective" intention is inadmissible as an aid to interpretation. Save for limited exceptions (such as rectification), the current law in this area is still very strict (Prenn v Simmonds [1971], 1 WLR 1381, Chartbrook v Persimmon Homes [2009], 1 AC 1001, etc.). As Lord Clarke pointed out in Rainy Sky v Kookmin Bank [2011], 1 WLR 2900:

...[these cases] stressed the irrelevance of the parties' subjective intentions.

Hence, the Employer's subjective intention of what he intended SCC-20(6)(4) to mean, even if proved, is irrelevant to the task of interpretation.

I accept that generally, if a literal and natural reading of a contractual term yields a "totally unreasonable and absurd" result, the court is unlikely to give effect to that interpretation because contracting parties, especially in commercial contracts, are unlikely to have agreed to totally unreasonable and absurd terms. But the question here is on what basis can one say that a contractual arrangement in which the Contractor is asked to waive any contingent L&E entitlement he might have for the first 90 days of the EOT should be regarded as "*totally unreasonable and absurd*".

Mr Hon sought to justify the Architect's interpretation by saying that given the facts of the case (i.e., the first 61 days of the EOT being granted for inclement weather), the Contractor would have forfeited L&E for 29 days only (90 days less 61 days with no L&E entitlement), and so limited a forfeiture would be contrary to what the employer wanted. But this is a circular argument because it assumed, in the Architect's favour, that his starting point is correct, namely that the Contractor had undertaken to waive 90 days of L&E entitlement, but that is precisely the very matter that still requires determination. As a matter of interpretation, one does not start with what the Employer subjectively intended the disputed clause to achieve and then works backwards to try to make the language used match his intention. The task of interpretation is to find out what the language used would mean to a reasonable person interposed between the parties.

The author wants to emphasize that there is no "right or wrong" answer in the interpretation of contract clauses. Only judges have the last say. 

Are Surveyors sidelined in Society? 測量界別是否被社會忽視？



Sr Tony Tse Wai Chuen

FHKIS, RPS(GP), Past President of the HKIS

The surveying profession has enjoyed a long standing in the United Kingdom and even helped conduct the first land sale in Hong Kong. Since the early 1980s, localization of the profession has accelerated and we now boast a 5,000-plus membership, which should be a significant component of society.

From acquisitions, design, construction, sales, and leasing to the property management of a development, the hand of surveyors is present in many components of extensive economic activity. Yet the public knows pitifully little about surveyors and their indispensable responsibilities. This is a social blind spot that we need to ponder and address.

Another puzzling fact is that even within the single largest employer of surveyors --- the government --- leadership roles are more, often than not, taken by non-surveying personnel, which has led to the deterioration of the profession since the handover.

Did such a problem arise from the minute classification of the surveying specialty? Is the public confused over our different tasks? Or are there other reasons for this lack of acknowledgement? Surveyors contribute greatly in all sectors of the housing and real-estate industry, and our collective voices should be heard in society.

It is not too late to rectify society's unfamiliarity with the surveying profession's economic contributions, and now we have been presented with a chance to do that. Whether or not we can consolidate and act as a single entity and find an united voice and speak up will very well be the tipping point towards our better representation in Hong Kong. The new administration has big plans for the future, and whether or not surveyors will play a major role in them depends on everyone in the surveying community choosing the right path.

測量師的專業，在英國有數百年的歷史；其於香港的足跡，在開埠後首次拍賣土地，已是由測量師主持。時至 1980 年代初，測量師加促本地化，至今學會已有超過五千位專業會員，應是社會一股不可小看的中流砥柱。

從土地規劃、發展以至物業管理、維修保養等，都是測量師

的專業，但在一般市民大眾心中，測量師的工作，最深的印象大抵是樓宇按揭估價、樓市評論和在街頭豎鏡製作地圖；對測量師的專業則了解甚少。何會有如此現象，作為業界的一份子，大家都或許曾有疑竇。

不少測量師於政府機構內服務，參與大量實務工作；但令人費解的是在關於房地產專業範疇內的決策領導階層，卻往往不是測量師；這個「外行指示內行」的現象，在回歸十五年後，情況反而比殖民地時代更為嚴重！

測量師在經濟民生的貢獻，是否被廣泛認受，從種種事例可見一些端倪：建築測量師對樓宇安全監督功不可，但有危樓情況之際，公眾接受之專家是否一定是建築測量師呢？工料測量師於物業發展成本控制，成績有目共睹，但屢屢發生嚴重超支的公共基建工程，政府決策人對工料測量師作為獨立成本控制專家，其所提的建議卻無動於衷；道路爆水管緊急搶修時，才驚覺土地測量工作重視不足，管道圖則錯漏百出……各種例子不勝枚舉，令人扼腕。

問題是否出於測量師的專業，有太多精細的分類，以致群眾不清楚各個專業範疇，導致其形象模糊而專業被忽視，或是尚有其他原因？本地化進程超過四十年，六個專業界別其實鏈鏈相扣，對香港經濟社會支柱 --- 房屋地產，有著舉足輕重的貢獻；如果能夠集合各從業者，團結數以千計的界別力量，在社會中發聲時，是否會有更響亮、更合符測量業界實力之效應！

而測量師業界是否決意找適合代表，從各種不同渠道，於制度中爭取發揮所長位置，亦是我們要深思的議題。很多仝人因為生活繁瑣，業務繁忙，無暇兼顧社會或專業發展的問題；但連學會應否置業作永久辦公室這樣簡單但重要的議題，問卷調查反應毫不踴躍，那是否表示，測量師自身亦不關心自己專業的發展，願意放棄其應得的社會認受和重視呢？

測量師的專業知識與經濟貢獻，與獲得社會重視不成正比，並非不可逆轉的情況；千里之路始於足下，與其默默耕耘、低著頭逆來順受，在新特首帶領的新一屆行政架構，決意積極檢討房屋政策的當下，現在是否是一個最佳的時機，讓我們團結力量、積極展現社會能量究竟我們可以做些什麼，令測量師能發揮其應有專長並展現影響力，提升社會的地位及再引起群眾重視呢？請大家集思廣益，為自己的專業奮鬥吧！