

voice from the...



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Spring 1999

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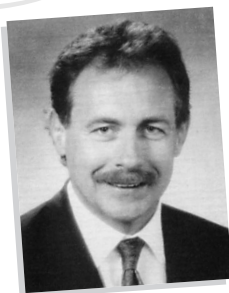
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Leaky Condo Strategies - The Special Great Truths!

Brian Chatwin, P.Eng.

CHATWIN ENGINEERING LTD.

Many "leaky condo" repairs are being done without expensive litigation and long drawn out court proceedings. How does this happen?

One of the essential ingredients to this recipe is a developer who is solvent and has an interest in solving the problem. Some of the incentives for developer cooperation are:

- The developer has other assets that could be in jeopardy if the strata goes to court and gets a judgment.
- The developer owns a number of unsold units of the development.
- The developer has other phases in the project to complete.

If you have a leaky condo and a developer who matches this description, don't get too excited yet.

SPECIAL GREAT TRUTH NO. 1

MOST DEVELOPERS WILL WANT TO DO
AS LITTLE AS POSSIBLE TO
SOLVE YOUR PROBLEM

Once you realize this, you'd better have a good strategy for negotiations and know where you want to go.

SPECIAL GREAT TRUTH NO. 2

IF YOU DON'T KNOW WHERE YOU'RE
GOING, ANY ROAD WILL TAKE YOU THERE

In order to develop this strategy, you will need to have put together a good team of Professional Building Envelope Specialist, Drainage Consultant, Lawyer, etc.

Take the case of the strata that discovered a leak in 1992. The developer came in with his

Brian Chatwin, P.Eng., Professional Engineer & President of Chatwin Engineering Ltd., Nanaimo, has over 25 years of experience in contract administration and negotiations in the development industry. Mr. Chatwin has successfully developed over 75 maintenance management systems for buildings and infrastructures.

caulking guns a-blazing and the leak stopped - for a year. When it leaked again, the developer re-caulked.

This went on for several years until the strata corporation said "*enough is enough, we'd better negotiate a proper repair.*" Meetings ensued, reports were done, letters were written and throughout the developer assured the strata council that he would "*do them right.*"

Last year the strata council, fearing their fiduciary responsibility to repair, decided to start a law suit. Guess what, the developer had successfully dragged the negotiations past the limitation period for trial.

Through lack of a good negotiating strategy, this strata council lost its ability to sue.

In a recent case, Chatwin Engineering Ltd. was involved with a project where we successfully negotiated with the developer to remediate all of the repairs to stop the leaks.

How did we do it? First of all, we had a great team consisting of Building Envelope Specialist, Drainage Consultant, Lawyer and a "*heads up*" strata council. We completed a condition report, but before we turned it over to the developer, we also completed the design, specifications and tender documents.

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Voice from the Strata-sphere

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Strategies & the Special Great Truths

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Once this was complete, our team met with the developer and laid out two courses of action:

- **Course of Action 1:** The developer does all of the repairs as outlined in the specifications under our inspection.
- **Course of Action 2:** We tender the job and start a lawsuit against the developer.

Needless to say, the developer chose Course of Action 1 and the repairs were successfully completed to specification.

I leave you with one last great special truth:

SPECIAL GREAT TRUTH NO. 3

DON'T START DOWN THE PATH OF REPAIR OR NEGOTIATIONS
WITHOUT AN OVERALL STRATEGY

Message from the President

Cora D. Wilson, Editor

1998 was a year of "crisis." Strata-sphere responded to the challenge by providing numerous educational "Leaky Condo" conferences in Victoria, Nanaimo, Parksville, Courtenay and Campbell River. Numerous leading professionals participated in these successful events.

How deep and pervasive is this crisis? Some claim that we have only seen the "tip of the iceberg."

Alarming litigation statistics were presented at a recent 1998 ENCON Conference in Vancouver. Twenty percent of the total active claims against architects and engineers across Canada are "Leaky Condo" claims. This is viewed by professionals as a "significant problem." There have been approximately 500 reported incidents and half of these have delivered formal claims. Twenty five percent of the reported claims are in litigation. The remedial costs range from \$100,000.00 to \$12 million.

This problem has generated a public inquiry, a new building envelope industry and new legislation. A leading lawyer, John R. Singleton, Q.C., partner in Singleton Urquhart Scott, described the problem as, "A more significant problem than any product failure such as asbestos, urea formaldehyde foam insulation ("UFFI"), the copper pipe problem, the heating panel problem and the blue laminated beam problem."

The simple cause of the problem boils down to construction and/or design deficiencies. However, the leaders in the field have not yet been able to definitively isolate any singular "cause" for the titanic failures. It is not as simple as "the building doesn't breathe" or "the building was clad with stucco" or "the building lacks an overhang." If the old technology didn't work, then how can we rely upon replacing "like with like?" The answer is, we can't. We must look to the leaders in the field for the answers as they evolve. If the building leaks, there is only one course of action - we must bite the bullet and hire a qualified, competent and experienced building envelope specialist.

The single greatest threat to strata corporations at this time is the failure to promptly and properly deal with water penetration problems. For this reason, this edition of 'Voice from the Strata-sphere' focuses on the building envelope industry.

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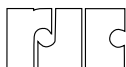
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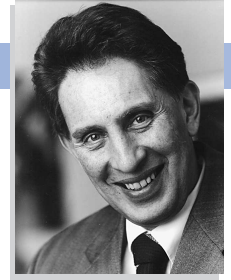


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We Are Not Alone!

Gerry Fanaken, President

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There was a time not so long ago that strata councils had essentially no information, or nowhere to turn to, when dealing with a "leaky condo." Things have changed significantly over the last two years and one would have to be living in a total vacuum to not know that there is now considerable help available to strata councils faced with water ingress problems.

Everyone knows, of course, about the Barrett Report and the resulting Homeowner Protection Act and the Homeowner Protection Office which is available to help owners with special assessments necessary for rehabilitation projects. The office is now open for business and providing a tremendous amount of assistance to those unfortunate condominium owners who are unable to meet the financial demands of their strata corporations. My experience with the HPO to date has been very positive and I find the staff to be extremely helpful and willing to serve the public in a very difficult situation. (The Homeowner Protection Office can be reached at (604) 646-7050)

Seminars on the topic of the leaky condos are now available almost on a monthly basis. Here are some current examples. In February, the Continuing Legal Education Society of British Columbia is sponsoring a day-long symposium on the topic. At the end of February, the Pacific Business and Law Institute is holding a symposium on lawsuits arising from leaky buildings. The chair of this symposium is Stuart Hankinson of the Vancouver law firm Shapiro Hankinson and Knutson. This law firm is extremely well versed in the issue and some of their guest speakers are well known industry experts. Through February and March, UBC is sponsoring seminars. In March, the Canadian Homebuilders Association is holding a symposium and, once again, a variety of industry experts are available. The list goes on and on and there is no excuse for a strata council to say that they had nowhere to turn to for help in dealing with their leaky condo.

Canada Mortgage and Housing Corporation is also in the forefront of developing programs and assistance for the public. A brochure entitled "Managing Major Repairs - A Condominium Owner's Manual" is expected in March and this will be a step-by-step procedure for condominium owners to understand just how they go about attacking the problem of a leaky condo. CMHC is also producing a substantial handbook, to be published by

Gerry Fanaken, President, Vancouver Condominium Services Ltd., Vancouver. Mr. Fanaken has been actively involved in the administration of strata corporations for about 25 years. His company currently manages 225 residential strata corporations which represents approximately 13,000 individual condominium units.

September, which is a guidebook for strata councils and property managers dealing with the rehabilitation of leaky condos.

Notwithstanding all of the available assistance, information, guidelines and so on, there are still strata councils that decide to "go it alone" and undertake repair programs without the benefit of professional help. Such strata councils are asking for trouble and it may be only a few years before they regret their decisions. While I do not mean to criticize the skills and integrity of the reconstruction industry, there is absolutely no doubt in my mind that a rehabilitation project cannot be undertaken without developing sound engineering specifications and without having intensive engineering supervision throughout the rehab program. The better quality remediation firms will surely agree with my point of view and support the position of having an engineering firm involved from start to finish. Unfortunately, there are some remediation firms that are advising strata councils that it is a waste of money to bring in an engineering firm when the solutions are already well known and available without necessitating the expense of having an engineer. While there may be some savings in this approach, for the most part it will amount to very little in the overall scheme of things and the big danger, of course, is that, at the end of the project, there is absolutely no guarantee that the work done will be done properly.

Strata councils are often quick to criticize developers for having taken shortcuts in the original construction of their properties to save money. Strata councils should not make the same mistake when their turn comes to rehabilitate their own properties. I cannot stress enough the importance of having rehab projects done under the supervision and direction of professional engineers who are qualified to deal with exterior envelope problems.

THE NEW CONDOMINIUM CONCEPT:

An examination of the *Strata Property Act* and the *Homeowner Protection Act*

by Gerry Fanaken

Published last October following introduction of the new legislation, this book (254 pages) covers the entire range and scope of the new condominium legislation proposed by the Government. Gerry Fanaken has written a number of guidebooks for strata councils and is well versed in strata corporation issues. Your strata council will learn a lot about the new legislation from this book.

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Homeowner Protection Regulations Passed

Shayne Ramsay, CEO

HOMEOWNER PROTECTION OFFICE

In October and November 1998, I had the opportunity to introduce the Homeowner Protection Office (HPO) at two Strata-sphere meetings held in Campbell River and Nanaimo. Since these two presentations, the HPO has continued its efforts to set the stage for renewed confidence in B.C.'s residential construction industry.

On January 29, the regulations for builder licensing and mandatory third-party warranties on new homes were announced by the Honourable Jenny Kwan, Minister of Municipal Affairs. This article highlights the regulations which will be in effect as of May 1, 1999 and some other activities of the HPO.

BACKGROUND ON THE REGULATIONS:

The licensing and warranty provisions of the Homeowner Protection Act are designed to work in tandem to strengthen consumer protection. The two systems will ensure that builders meet minimum standards and, if a construction defect occurs, consumers will be protected by the warranty. We have engaged in an extensive consultation process with stakeholders to get their input on the development of the regulations.

LICENSING:

Starting on May 1, 1999, all residential builders applying for a building permit will be required to be licensed by the Homeowner Protection Office. Owner-builders are exempt from licensing. In order to obtain a building permit, builders will have to show proof that they are licensed and that their proposed new homes are covered by a third-party home warranty provider authorized by the Financial Institutions Commission (FICOM) to provide that type of insurance.

Residential builder licenses will cost \$600 for the first year. Annual renewal fees will be \$500. An additional \$25 per housing unit will be charged as part of the licensing fee.

The licensing system is designed to be flexible to meet changing conditions. Future requirements could include standardized courses and training which will be developed in consultation with industry associations.

LICENSING OF RENOVATORS AND RENOVATION WARRANTIES:

A priority of the Homeowner Protection Office is the licensing of renovators and the establishment of mandatory warranties for renovations. This provision is a high priority for the HPO and will be brought into force in 1999 for major renovations such as wall replacements on leaky condos or major additions to homes. Minor renovations will not be covered by licensing or mandatory warranties.

MANDATORY THIRD-PARTY WARRANTIES ON NEW HOMES:

Starting on May 1, 1999, residential builders applying for building permits to construct new homes will be required to provide third-party warranties. Owner-built homes, purpose-built rental housing (multi-unit dwellings with a single legal title which are built for rental purposes), factory built homes, hotels, motels, dormitories, care facilities and float homes are all exempt from warranty requirements.

Minimum coverage and standards for home warranty contracts are now set by regulation. Minimum coverage includes 2 years on labour and materials, 5 years on the building envelope and 10 years on the structure of the home.

The warranty requirements will be established by regulation under the Insurance Act. The regulations will establish conditions regarding:

- how warranty companies operate including the registration of builders and units under the program;
- minimum coverage limits for homes and common property;
- allowable exclusions from coverage;

Shayne Ramsay, CEO, Homeowner Protection Office. Mr. Ramsay's experience in the housing and construction field goes back to 1986. He is the former Director of Development Services for the B.C. Housing Management Commission (1996-1998) & Housing Policy and Program Development with the B.C. Ministry of Municipal Affairs and Housing (1995-1996).

- commencement dates for coverage;
- disclosure requirements to purchasers, owners and strata councils; and
- a mandatory third-party resolution of disputes between warranty providers and homeowners.

NO-INTEREST REPAIR LOANS AND THE BUILDER LEVY:

One of our first priorities when the HPO opened its doors in October 1998 was to offer no-interest loans to homeowners who are not able to finance the repairs to their leaky homes. Since the inception of this program, the HPO has helped over 200 homeowners to not lose their homes by approving over \$4 million in no-interest loans.

To fund the interest portion of the Reconstruction Loan Program, starting May 1, 1999, builders applying for building permits in what is called the coastal climate zone will pay \$750 per unit for every new home of a multi-

Increasing Consumer Protection

Residential builders will be required to meet minimum standards and be licensed by May 1, 1999.

Mandatory third-party warranty coverages for new homes built after May 1, 1999 include:

- 2 years on labour and materials
- 5 years on the building envelope &
- 10 years on structure



Homeowner
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RESTORING CONFIDENCE



unit project. This fee is less than the \$1,000 per unit recommended in the Barrett Report. Single detached homes, purpose-built rental housing and provincial social housing programs are exempt from this builder levy.

OWNER-BUILT HOMES:

Another area of interest is owner-built homes. An owner-builder is defined as a person who builds a single, detached home for their own personal use, not more than once in any 18-month period. An owner-builder does not have to be licensed or provide a third-party warranty on their home.

An Owner-Builder Declaration and Disclosure Notice must be filled out when applying for a building permit. Should owner-builders want to sell their homes within the first 10 years, they must provide the purchaser with a copy of this notice indicating that the home is not built by a licensed builder and a mandatory third-party warranty is not in place.

Although purchasers of owner-built homes are not protected by builder licensing and mandatory home warranty protection, they are protected by the Statutory Protection provisions of the Homeowner Protection Act. These provisions require all new owner-built homes to be reasonably fit for habitation, built from materials of good quality, and designed and constructed with ordinary competence, skill and care.

ALTERNATIVE DISPUTE RESOLUTION (ADR):

Another area of interest is the Alternative Dispute Resolution provisions of the Homeowner Protection Act. The Act provides that the Cabinet can make regulations respecting the mediation or arbitration of residential construction disputes either before or after an action has commenced.

If there ever was an area that can benefit from Alternative Dispute Resolution, it is residential construction disputes. Right now there are about

250 leaky condo disputes in the province. Small disputes typically involve 4-5 parties and larger disputes can involve up to 30 participants. The cost of litigating these disputes is enormous and increases dramatically as parties are added. A four-week trial with five parties will typically cost each participant in the neighbourhood of \$100,000. Trials must be considered as the very last option in these types of cases.

The Homeowner Protection Office in conjunction with the Dispute Resolution Office of the Ministry of the Attorney General is participating on a broad-based committee looking at various issues respecting mediation and arbitration options. The most attractive aspect of ADR is that it will provide a faster resolution of disputes than the courts and allow the various parties to get on with their businesses and their lives. ADR can also be a cost-effective alternative to the court system.

One option, which has been identified, is the potential for a mandatory mediation process similar to the one currently in place for motor vehicle injury accident disputes. Our goal is to introduce a mandatory mediation process in 1999.

Mandatory mediation will allow a party to a dispute to require the other parties to engage in a mediation process. Mandatory mediation will not result in a binding decision, but simply provide an opportunity for a mediated settlement by the parties.

This provides a basic overview of the builder licensing and mandatory home warranty regulations and the activities of the HPO.

If you are interested in obtaining a copy of the regulations, you can get it off the Homeowner Protection Office website at www.hpo.bc.ca. Our toll-free information line is also available.



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The Duty to Repair and Maintain Who is Responsible?

Malley Margetts, B.Ed., CPM, Certified Property Manager
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Over the years we have had many thought provoking conversations with Strata Councils as to who is responsible for repair and maintenance of common property, common facilities, and other assets of the strata corporation versus strata lots, limited common property, and areas allocated to the owner's exclusive use.

The *Condominium Act* defines the strata corporation's and the owners' responsibilities as follows: Section 116 - "*A strata corporation must do all of the following: (f) maintain and repair the exterior of the buildings, excluding windows, doors, balconies and patios included in a strata lot, including the decorating of the whole of the exterior of the buildings*" and Section 115 - "*An owner must do all of the following: (c) repair and maintain the strata lot, including windows and doors, and areas allocated to the owner's exclusive use, and keep them in a state of good repair, reasonable wear and tear and damage by fire, storm, tempest or act of God excepted.*"

Common property includes (but is not limited to) the roof, exterior of the buildings, public halls and lobbies, roads, sidewalks, sewers, heating, electrical and plumbing systems, elevators, laundry and recreational facilities, underground and outside parking. It is further defined as the centre of the floor, wall or ceiling and forms the common boundary of a strata lot with another strata lot or with common property. Repairs and maintenance to common property is covered in the annual operating budget or by Special Resolution. Many prospective owners buy a strata lot in a Strata Corporation to escape the responsibility of caring for what, in a strata plan is the responsibility of the Strata Corporation, and in a private home a personal burden. They expect the Strata Corporation to handle the repair and maintenance of their property. They do not understand that the Strata Council is made up of the owners who make the decisions for the Strata Corporation within the restraints of the *Condominium Act*. These owners do not want to serve on Council or become reluctant members of Council. It comes as a "*shock*" to these owners when the Strata Council informs them that the problem is not a Strata Corporation responsibility, especially in dealing with "*windows and doors, and areas allocated to the owner's exclusive use.*" In the new *Strata Property Act* the responsibility to repair and maintain is clear: it is part of the statute as well as bylaw 8 that the Strata Corporation is responsible to repair and maintain unless their own bylaws state otherwise.

Lets focus on windows. When a window breaks, it is the owner's responsibility to replace it. However, the building insurance policy may cover blanket exterior glass breakage, subject to a deductible. The owner has the right to make a claim against the policy since he pays a portion of the insurance premiums in the monthly assessment payments. By a change in the Strata Corporation bylaws, the owner is made responsible for the insurance deductible. This bylaw is allowed under the current Act but not in the new *Strata Property Act*.

Furthermore, if a seal goes in a thermo-pane window, we have maintained that the owner is responsible for replacement. Moisture between the panes does not affect the unit, except aesthetically.

What happens when water enters into the strata lot via the window or another source? The responsibility to repair and maintain lies in how did the water get in. If water enters from the exterior, e.g. window frame, it is our opinion that the Strata Corporation has the duty to repair the defect. It is also the duty of the owner to report to the Strata Council and Property

Mrs. Margetts has managed Strata Corporations for over fifteen years. She received her CPM designation through the Institute of Real Estate Management in June 1988. Her staff consists of two Property Managers and three assistants. Brown Bros. manages 84 strata corporations representing 2,297 strata lots.

Manager as soon as he is aware of the problem. The problem can be investigated and a solution found before it becomes a bigger problem and expense. If more than one strata lot is affected it is recommended that a building envelope specialist be hired to locate the source of the leaks and recommend the necessary repairs. However, there are Strata Councils who believe the problem is the owner's responsibility to repair and the Strata Councils will do nothing. There are insufficient funds in the operating budget to handle "*water problems.*" The Property Manager can only recommend a course of action but ultimately the decision comes from the Strata Council.

On December 17, 1998, the Honourable Mr. Justice Hutchison ruled "*the cost of replacement of the windows and window frames of the strata lots owned by each of the Petitioners ought to be paid by the Strata Corporation, once the directors became satisfied that the building was in peril from leaks*" (Mackin, et al v. Strata Plan 1374). In addition, the owner must keep his windows caulked and sealed on the exterior.

Another issue is water damage caused by a hot water tank in the strata lot. The Strata Council cannot force the owner to replace the tank due to age. What happens when the water tank bursts and water goes onto the common property and other units? The replacement of the tank is the owner's responsibility. A claim can be made through the building insurance policy, subject to a deductible. Individual policies will not accept the claim as the resultant water damage is through common property. The responsibility of paying the deductible depends on the Strata Corporation bylaws under the current Act. Be aware that the number of water damage claims will result in higher insurance deductibles.

In closing, Sections 116(f) and 115(c) of the *Condominium Act* are a matter of interpretation. For every problem that is viewed as the owner's responsibility to repair and maintain, there may be an equally valid point that it should be the Strata Corporation's duty to repair and maintain. It is up to the Strata Corporation to ensure their bylaws are clear on these responsibilities.



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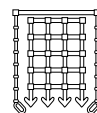
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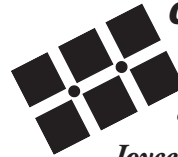
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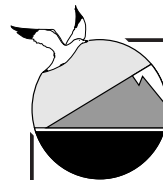
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The Strategic Plan - A Necessity

Cora D. Wilson, Lawyer
C.D. WILSON & ASSOCIATES



The "Leaky Condo" Crisis is pulling the Condominium Community together. Professionals are conferring with their peers and other professionals. Lawyers, engineers, building envelope specialists, property managers, strata councils, unit owners and many developers are working towards the common goal of repairing the devastating effects of water deficiencies. Progress is being made. However, although co-operation exists, the path to success is often not clear and many suffer crippling confusion regarding the process and acceptable procedures. Each party has different objectives resulting in inevitable and sometimes irreconcilable conflict.

The developer is motivated to finish the project, while maximizing profits and preserving its reputation. The strata council hides its head in the sand hoping that the honourable developer will come to its rescue. It tenaciously avoids its mandatory duty to repair. The victimized unit owner rebels against expenditures of money and the hiring of professionals. The evolving building envelope profession demands higher, more expensive and more exacting standards of repair to avoid "retrofitting the retrofit." The legal community struggles with intensely complex, multiple party litigation to "right the wrong." How do we resolve these conflicting differences and still attain our goal?

Until recently, there has been no clearly defined step by step guide available to the condominium community to deal with this titanic problem. A plan is now available.

The strategic plan should address the following: goals and objectives; professional team, including lawyers, building envelope specialist, expert witnesses and others; steps to attain the objectives; constraints and road blocks;

Cora D. Wilson, Condominium Lawyer & Educator, C.D. WILSON & ASSOCIATES, Nanaimo. Ms. Wilson has represented condominium interests for over a decade. She currently represents Strata Corporations from Victoria to Port Alice. She is a regular lecturer on Condo issues at Malaspina University College, Editor of "Voice from the Strata-sphere," Publisher through Strata-sphere, of the first ever Vancouver Island Condominium Directory and frequent lecturer and chair of numerous Strata-sphere conferences.

strategies and options to deal with constraints; budget for each professional and monitoring expenditures; funding options; strategies to keeping the unit owners informed; and, timing.

In order to maximize the probability of success with the least amount of financial and emotional pain and meet the retrofit goal in the shortest possible time frame, the strata council must at the outset prepare a strategic plan. As every project has unique issues, there is no single strategic plan recipe. Professional assistance is required.

Projects which fall off the rails or never properly get on the rails, inevitably experience higher costs at the end of the day. Rot is progressive. Elusive limitation periods and New Home Warranty claims expire. With each passing day, costs increase. Strata councils must act upon discovering evidence of water penetration. Failure to do so will result in the unit owners bearing the brunt of the increased costs. Time is of the essence! Don't delay.



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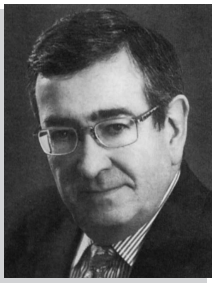
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Leaky Condos - A Legal Update

The Limitation Period

Glenn A. Urquhart, Q.C., C. Arb.

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The Barrett Commission's Report on what I will refer to as "leaky condos" estimated that the cost of repairs of leaky condos may be in the range of \$500 - \$800 million. Out of that Report the *Homeowner Protection Act* was passed which came into force July 30, 1998. The Act created the Homeowner Protection Office and made it responsible for licensing residential buildings. The Act also makes new home warranties mandatory, gives the government the ability to set minimum terms and conditions for the new Homeowner warranties and establishes procedures that third party warranty providers must follow in managing the business. The objective here is consumer protection, increased accountability in, and improved quality of, residential construction. Past regulations are anticipated to be in place by January of 1999. The Act also has an expansive definition of the owner which includes a strata corporation, a co-operative, a corporation or society having ownership interest, and a subsequent purchaser of a new home. There is a dispute resolution process set forth in Part 10.

The basic problem with all of this is dealing with the existing leaky condo problems. The purpose of my comments is to provide a brief update of what has occurred in the law in 1998.

Most leaky condo claims appear to be trudging down the litigation road to court at considerable expense to all parties. There are few recent decisions in the last year to assist or guide people with respect to responsibilities of owners, contractors, architects and engineers as to how to resolve the litigation on a timely basis.

There are a number of legal issues that have to be dealt with. One is the question of what is the nature of the damage arising from the Winnipeg Condominium v. Bird Construction case. Mr. Shapiro discussed this case in the fall 1998 issue of Strata-sphere. One of the main questions is what is the nature and type of damage that has occurred and whether the damage is physical damage, dangerous or economic loss. If it is pure economic loss and not a dangerous loss to the owners, this approach creates difficulty in allowing successful claims to be advanced against parties who do not have contracts between them. An example is the case of Strata Plan No. VR170 v. Bart Developments Limited (1998). In that case, although the main issue was the limitation period, the court did review whether the cost of replacement of the roof and stucco could be considered as pure economic loss. The court stated that the actual repair costs resulting from physical damage did not come within the legal principles in the Winnipeg Condominium case. It remains uncertain as to the extent of the leakage (or damage) that is required before the legal principles as to dangerous defects in the Winnipeg Condominium decision can be applied.

Thus it may be difficult to litigate successfully, where there is only non-dangerous economic loss from leaks as opposed to physical damage and dangerous defects (collapse of the ceiling from water), against some of the parties with whom the owners have no contracts.

There is also another issue which arises, and that concerns whether a two-year limitation period (physical damage) or a six-year limitation (economic loss) applies. Earlier cases have decided that the two-year limitation period applied to injury to property (e.g. roof collapse). Thus, if it could be demonstrated by the defendants that the loss was injury to property, then a number of owners might be foreclosed out of their claim because they did not file a claim within that two-year period. There is a recent decision in Strata Plan No. VR1720 v. Shaw in 1998 which may affect which limitation period is applicable in leaky condominium cases. In Shaw, an application was brought by a plaintiff in an action for damages with respect to alleged construction deficiencies in the condominium development. The central issue was whether an action for damages for injury to property is an action for damaged property, and whether limitation postponement provisions in the Limitation Act would apply. In terms of the commencement of the limitation period, the court concluded that it is the knowledge of individual owners which determines when the limitation period starts to run for the purposes of the postponement provisions and that each owner of a strata unit must be taken to have the knowledge or means of knowledge of the previous owner and of the strata corporation. Thus, if a previous owner knew of a leak problem, but did nothing for six years, then the Limitation Act may prevent the commencement of an action by a subsequent owner. This case is, however, under appeal.

Glenn A. Urquhart, Q.C., Partner, Singleton Urquhart Scott, Vancouver. Mr. Urquhart practices in the area of construction law, insurance law, securities and professional liability. He is an Adjunct Professor in Construction Law, UBC and he is a Chartered Arbitrator and Member of the Arbitrators Institute of Canada. He is the Editor-in-Chief of Professional Liability and Discipline Litigation Quarterly and the former Western Canadian editor for Construction Law Reports.

The limitation provisions were also an issue in the Bart Developments case referred to above. In that case, the project developed severe problems with leakage. The Writ of Summons was filed in November 1995, nine years after the project was completed. Professional negligence and breach of warranty was alleged against all defendants. The defendants claimed that the action was commenced outside the six-year limitation period and there was no reason to postpone that period of time. The court found that time begins to run against the claimant when the claimants reasonably ought to have known the facts and taken advice on those facts so as to be able to conclude that an action would have a reasonable chance of success. Thus, some of the problems which occurred in 1989 were barred and deficiencies not within the claimant's knowledge were not barred. This case is also under appeal.

Thus, as one can see from the above, there are many technical legal problems that are going to have to be dealt with by the Courts as to the type of damage and the limitation period before many of these cases can be resolved.

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Building Envelope Specialists Who Are These Guys?

Craig Labas, P. Eng.

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Several years ago most people had never heard of a building envelope, let alone a Building Envelope Specialist. Who are these guys and why did they happen?

When the "leaky condo" problem first started to surface, the first strata councils involved had to chart the course for solving this dilemma. When faced with the problem of a leak in their building, their natural tendency (and rightfully so) was to get a contractor (or THE contractor) to come in and fix the leak. At that time no one suspected how complex some of these "leak" issues were.

The heartbreaking result in many of these initial "fixes" was that after spending lots of money on repairs, the condo still leaked.

The following quotation summarizes the problem with this approach: *The thinking that got us into these problems is not the thinking that will get us out?* Albert Einstein

Through the initiative of various governments and associations, the certification of Building Envelope Specialists has come about. The building envelope is that part of the building that protects the interior from the outside elements. This includes roofs, exterior walls, windows, doors, etc..

A Building Envelope Specialist is a professional who has experience in the building sciences relating to the design and operation of building envelopes.

The Architectural Institute of British Columbia has taken the initiative to provide a certification program for Building Envelope Specialists. The course started in 1998 with the first certification being completed in early 1999. Certification will require the following:

- Must be a registered Architect or Professional Engineer
- Must have successfully completed the building certification course
- Must have practical experience in working with building envelopes

Craig Labas, P. Eng., with Chatwin Engineering Ltd., Nanaimo. Mr. Labas is a professional Engineer specializing in building envelope problems. Mr. Labas has over 18 years experience in both the construction and design of structures incorporating building envelope techniques.

The course is very thorough and contains the following modules:

- Module I - Building Science and the Building Envelope
- Module II - Applications of Building Science: Design and Practice
- Module III - Building Envelope Field Services
- Module IV - Roles and Responsibilities

To date, approximately 200 people has registered for these courses. By early in the new year, most of these Building Envelope Specialists should be certified.

The majority of people enrolled in the B.E.S. program are Architects who will assist in new construction. Professional Engineers make up about 15-20% of the enrollees. The Engineers, while actively involved with new construction, are involved in the majority of the remediation projects.

Should your project go to litigation, it would be difficult to be qualified as an expert witness without building envelope certification.

If you have a "leaky condo" problem, the first person to turn to for recommendations on how to fix it is a Building Envelope Specialist.

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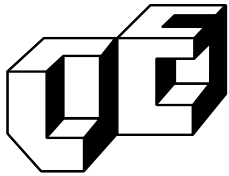
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Building Envelope Specialists - What Do They Do?

“Condition Assessments”

Pierre-Michael Busque, P.Eng.,
LEVELTON ENGINEERING LTD.

It is no secret that performance problems with wood framed multi-unit residential buildings are becoming more common in this region of British Columbia. In fact, failure of previously repaired buildings is not unheard of. The resultant concern is causing an increasing number of Stratas to retain building envelope specialists to perform building envelope condition assessments.

The purpose of a building envelope condition assessment is usually twofold:

- To provide the Strata with a professional opinion on the risk of potential building envelope failure: and
- To provide a clear understanding of the construction details or building components that have failed to perform and to catalogue the damage to the components associated with these failures.

Typically, unless the building envelope failure is catastrophic, the Building Envelope Condition Assessment is the first step towards the conception of a repair strategy for the building.

A variety of investigation techniques are available when called upon to conduct a building envelope condition assessment. These techniques can be classified into two categories; those that permit a direct verification of the condition of the components and those that provide circumstantial evidence that a building envelope failure has occurred. Though not every technique available to building envelope specialists will be discussed in this section,

Pierre-Michael Busque, P.Eng., is a professional engineer with Levelton Engineering Ltd. He has a history in research projects, technology transfer to the construction industry, and remediation of failed building envelope systems. Mr. Busque is presently conducting thermography research on behalf of CMHC.

insight is provided on those that are frequently employed.

DIRECT METHODS:

The direct methods of assessment of the condition of the building envelope permit verification that a performance failure of the building envelope failure has occurred and that deterioration has taken place.

Measurement of the Moisture Content of the Wood Components of the Building Envelope.

With the exception of visual observation of a building, the measurement of the moisture content of the wood components of the building envelope is by far the most widely used assessment technique. These measurements can be performed from the interior of the building if an internal cut test is performed. This provides an opportunity to verify the localized moisture distribution within the wall assembly. For example, the sheathing of the wall may be dry, but the studs and sill plates may be wet. Cut tests are described later in this section.

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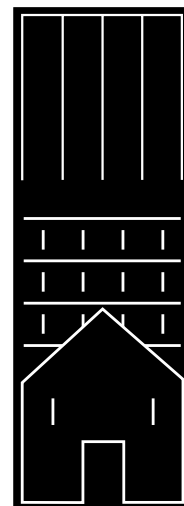
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The most common practice however is to measure the moisture content of the sheathing on the exterior of the building. The moisture probe procedure involves drilling two, 1/4 inch (6 mm) diameter holes that penetrate the cladding, just into the sheathing behind the building paper. The holes are drilled approximately 3/4 inch (20 mm) apart, then two 4 inch (100 mm) long prongs are inserted through the holes so that their tips penetrate slightly into the sheathing. These prongs are insulated with electrical tape, epoxy resin, or 'shrink wrap' sleeves to insulate the metal prongs from any moisture other than that detected at the sheathing. The electrical conductivity of the wood sheathing is then measured from prong tip to prong tip. Higher conductivity values means higher moisture readings as water increases the conductivity through building materials.

The results of the moisture content surveys are usually presented in a graphical representation and shown as colored dots placed on plans of the building elevations. Different color dots are used to denote the measured moisture content of the sheathing. Typically green dots are used to denote moisture content readings below 20%, yellow for readings from 20% to 28%, and red for values over 28%. This is consistent with Canada Mortgage and Housing Corporation's recently released Best Practices Guide, Wood Frame Envelopes in the Coastal Climate of British Columbia (Sept. 1998).

The moisture content of wood components is important because wood decay fungi require moisture contents near 30% to initiate growth, but once established, moisture contents above 20% are sufficient for fungal and mold perpetuation. Wood is generally considered immune to fungal growth below 19% moisture content. The British Columbia Building Code states that wood must have moisture content of 19% or lower at the time of installation.

Moisture content testing results may however be misleading and caution must be used to interpret the results. This can be attributed to the probable redistribution of moisture within the wall due to the effect of the sun. Moisture content readings performed during the summer may produce a "false negative" effect lulling the building owners into a false sense of security. Needed repairs to a failed building envelope may therefore be delayed, thus allowing further decay of the wood components of the wall. It is therefore recommended that this type of testing be performed during good weather at the tail end of the winter months.

Cut Tests

Cut tests can be performed on the exterior or on the interior of a building with the intention of assessing the condition of the wood components of the building envelope. Internal cut tests are performed by removing a portion of the interior building finish to gain access to the exterior wall sheathing. The advantage of such a method of conducting a cut test is that the integrity of the exterior cladding is not compromised. Exterior cut tests are made by removing a portion of the cladding and sheathing itself.

INDIRECT METHODS:

The indirect methods of investigation provide an indication that a performance failure of the building envelope has taken place but do not allow verification that deterioration of the components of the building envelope has occurred.

Interviewing Informed Persons

A person within the sphere of activity of an organization may exert considerable influence on the decision-makers of this organization. He or she is typically the person that convinces the Strata that a building envelope condition assessment is required. This person may be the property manager, the strata chairperson, the maintenance manager or simply an owner.

Interviewing this person may be the most cost-effective method of obtaining information on the building's history, on past maintenance issues and on the overall performance of the building envelope.

Resident Surveys

This tool is useful in assessing the performance of the building envelope as perceived by the occupants. The resident survey offers the advantage of locating building envelope failures that would not be visible from the exterior of the building. For example, in a resident survey performed during the course of a building envelope investigation, one resident reported that a mushroom had grown on the floor of her bedroom near an exterior wall. In another survey, it came to light that residents never reported leaks into their units in the 10 years that they had occupied the building; their section of the building had to be torn down and rebuilt because the wood components of the structure had severely deteriorated.

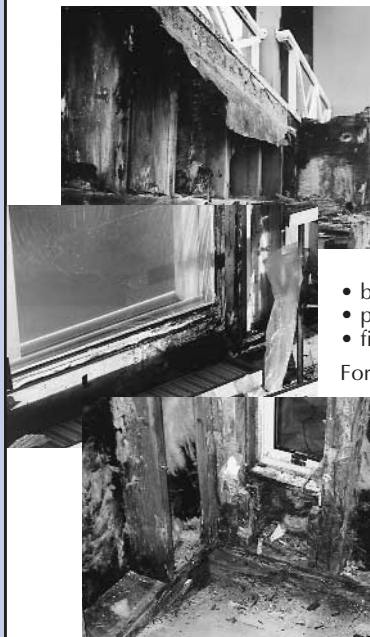
Infrared Thermography

Infrared Thermography is a non-destructive test method used to identify thermal anomalies. These anomalies may be indicative of reduced thermal value resulting from moisture entrapment within the building envelope assembly. This test method may experience limited success depending on site and climatic conditions and qualified interpretation is vital.

SUMMARY:

A multitude of investigative tools and techniques exist to assist the Building Envelope Specialist in conducting building envelope assessments. As a general rule, it is advisable that a variety of tools be used to assess the condition of the building envelope as repairs tend to be extremely costly. The different tests performed will provide what could be referred to as the "vital signs" of the building. The interpretation of the testing results is where the experience of the investigation professional will pay off for the Strata.

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Thomas R. Morstead, is the principal of MHP Building Consultants Limited, Vancouver. Mr. Morstead has completed countless building envelope failure investigations and remediation projects. He provided technical opinions to the Barrett Commission. Mr. Morstead is the main instructor of a mandatory course provided by the Architectural Institute of British Columbia for building envelope practitioners.

Since the Barrett commission, it is much easier for building envelope consultants to answer the usual cocktail-party question; “– *and what do you do for a living?*” In the last year it seems that everybody who is involved with the leaky condo problem has come from obscurity to a kind of infamous notoriety. The public is now apparently well aware that there are professional consultants that provide services pertaining specifically to the walls, windows and roofs of buildings. However, with all the recent publicity about leaky condominiums and the players involved, it is easy to forget that building envelope consulting is actually a new field that is only just now emerging within the construction industry.

At the present time there can be little consensus about the standards of practice for building envelope consultants because the profession is not yet fully formed. It may take years just to resolve whether building envelope consulting is within the practice of architecture, a discipline of engineering, or some hybrid of the two. However, with the public relying more and more heavily on this new consultancy, some efforts should be made to establish uniformity in the way building envelope consulting practitioners approach their work.

One phrase that seems to have recently emerged from techno-obscurity into common parlance along with “rain screen” and “face seal” is “*building science*.” It is now possible for architects and engineers to take courses offered by the Architectural Institute of B C in building science. According to some business cards, there are “*building science specialists*” and there are firms that provide services “*in the building sciences*.” But what is “*building science*?” And more importantly, can we use its precepts to help shape the way building envelope consulting is practiced?

In 1983, a text book called “*Building Science for a Cold Climate*” was published. The text book describes the concepts and calculations, procedures and possibilities that are, at least, the basis of building science. But these principles rely on even more fundamental concepts that are often neglected in building science practice. The underpinnings of building science are indeed scientific in nature. To practice good building science you must practice good science. A well known building scientist once said “*Nature, to be commanded, must be obeyed.*” To obey nature we must understand it and science is the way to understand nature.

Failure investigation of in-service buildings, such as a leaky condominium, is a service commonly provided by building envelope consultants. Investigation of a leaky condominium is also an area where the integrity of the consultant’s opinion can be substantially compromised by neglecting to rigorously apply the methods of science. Visual inspection by an informed investigator to develop a complete picture of the situation can be a powerful tool. Less than adequate basic information gathering can lead to flawed assessments which in turn can result in deficient recommendations – possibly for the duration of a consulting career.

For example, the frequently cited finding that the stucco wall cladding of old lath-and-plaster walls tends to be unaffected by moisture has been used to justify using strapping behind all wall cladding during retro-fit and new construction of condominium buildings. In this instance a single observation about the difference between a current stucco application technique and an older one has resulted in unquestioning reliance on the older technique.

The “*good*” performance of the lath-and-plaster cladding on an old building may derive from the protection from weather afforded by tall trees or other buildings surrounding the site. The investigator may have failed to note other important observations. The walls of an older building are often without effective thermal insulation or air and vapour tightness. These enclosures may survive through a combination of exorbitant energy bills and very dry interior air conditions. These characteristics of the lath-and-plaster wall are less apparent to casual observation but may be far more important to a useful explanation of the survival of old stucco wall claddings than simply the presence of an air space behind the stucco.

Without carefully and fully observing the factors that obtain, clear and simple, straight-forward wrong conclusions can follow. Failing to gather sufficient facts to make an informed assessment about the functioning of a particular building envelope is bad science. Assuming that an air space behind a cladding will improve the performance of any wall based on a cursory inspection of the stucco of an old house is bad building science.

In summary, building envelope consulting practice, like any other scientific discipline, requires competent observation and assessment skills. Let us not forget that science really is part of building science.

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