

Gone but Not Forgotten – Water Ingress Claims in British Columbia: Will Rainscreens and Building Envelope Professionals Prevent Another “Leaky Condo Crisis”?¹

Karen L. Weslowski, Partner
Miller Thomson LLP, Vancouver
kweslowski@millerthomson.com
604.643.1290

I. Introduction

The “leaky condo crisis” in British Columbia is unparalleled in scope with respect to the number and magnitude of claims made for building construction deficiencies in the province. This crisis spanned almost two decades and generated extensive litigation, public inquiries, a new remediation industry, a new category of professional building consultant and new consumer protection legislation.

Recently, the question has been raised as to whether there is a “second wave” of leaky condos giving rise to another leaky condo crisis in British Columbia. If so, should the water ingress exclusion, which was added to professional liability policies to ameliorate the effects of claims made during the leaky condo crisis, be expanded or, if since removed from the policy entirely, re-incorporated into professional liability policies?

Although water ingress claims against design professionals still exist, such claims have been minimized due to a variety of mitigating factors, including the introduction of new construction requirements imposed by the *British Columbia Building Code* (the “*BC Building Code*”) and the *Vancouver Building By-Law* (the “*VBB*”), the warranty scheme contained in the *Homeowner Protection Act*² and the introduction of the Building Envelope Professional (“*BEP*”).

As a result, the expansion or re-addition of the water ingress exclusion to professional liability policies is not likely required. However, risks remain and prudent underwriting and appropriate risk management must still be exercised in order to limit claims exposure.

II. The Leaky Condo Crisis – What was it?

Beginning in the 1980s and carrying through the late 1990s and early 2000s, the Greater Vancouver area of British Columbia’s Lower Mainland region and, to a lesser extent, the southern Vancouver Island region, experienced a construction boom in the residential condominium market. This building boom resulted in construction that incorporated new technologies and design features from other jurisdictions and climates.

¹ The author gratefully acknowledges the assistance of Erika Lai, Articled Student, at Miller Thomson LLP, Vancouver, British Columbia, for the research in support of this paper.

² *Homeowner Protection Act*, S.B.C. 1998, c. 31 [the “*HPA*”].

Unfortunately, these technologies and designs were not appropriate for use in the coastal region of British Columbia, which is essentially a temperate rain forest. As a result, these buildings experienced widespread and systematic building envelope failures otherwise known as a “leaky condo”.

The hallmark of a leaky condo was water ingress through the exterior building envelope (*i.e.* roofs and walls) and the weather barrier. Normally, the weather barrier allows water vapour to penetrate but prevents water drops. As a result of problems in design and installation, widespread water ingress through the weather barrier occurred. This caused rot, delamination of exterior wall cladding and sheathing, rusting in metal wall studs, rot in wood structures, saturation of batt insulation and the development of mould inside the walls and building interior.

Early in the crisis, most of the condominiums affected by water ingress were low-rise, three to four story buildings with wood-frame construction. The latter part of the crisis saw water ingress affecting high-rise buildings with steel, concrete and metal stud construction.

Approximately 45% of the 160,000 or so condominiums and 57% of the 700 schools constructed in British Columbia between 1985 and 2000 were found to have water ingress issues.³ In 2002, it was reported that 90% of three or four story units built during this time suffered from building envelope failure and water ingress, and that some have undergone envelope repairs two or three times since construction.⁴ In 2008, it was estimated that the cost to repair the damage to schools alone would be almost \$400 million.⁵

There were several factors that gave rise to the leaky condo crisis, including:⁶

- Inappropriate design features and building materials incorporating reliance on face-sealed wall systems;
- Changes in building codes which permitted unsuitable design and construction;
- A fundamental lack of awareness regarding the principles of enclosure design suitable for the Lower Mainland climate;
- Lack of meaningful inspection at critical stages of construction; and
- An inadequate regulatory system and warranty program.

(A) *Inappropriate Design Features and Building Materials Incorporating Reliance on Face-Sealed Wall Systems*

The construction boom of the 1980s and 1990s embraced building styles and forms inspired by the Mediterranean and southern California. Common building elements of this style included a

³ Wendy Stueck, “Dark clouds keep rolling in on B.C.’s leaky condos”, *The Globe and Mail* (13 March, 2009), online: <www.theglobeandmail.com>.

⁴ “Huge nationwide repair bill for new homes with leaks”, *The Royal Society of New Zealand* (13 April, 2002), online: <www.royalsociety.org.nz>.

⁵ “Leaky B.C. Schools to Cost Millions to Fix”, *CTV News* (7 September, 2008), online: <www.bc.ctvnews.ca>.

⁶ British Columbia, Commission of Inquiry into the Quality of Condominium Construction in British Columbia, *The Renewal of Trust in Residential Construction*, (Victoria: Government of British Columbia, 1998) at Chapter One, II. What Has Gone Wrong [the “Barrett Commission”].



roof parapet with no overhangs or eaves, stucco wall cladding, open walkways, arched windows and complex cladding joints. These design features provide greater opportunity for water ingress.

Another major contributing factor to the leaky condo crisis was the increase in the use of cladding systems such as acrylic stucco and exterior insulation finishing system (“EIFS”) which are highly resistant to infiltration and exfiltration of water and moisture. Unlike more traditional materials, such as wood siding or cement-based stucco, these materials allow any water or moisture that penetrates into the system through cracks in the surface, unsealed joints, or incorrect flashings to become trapped inside the wall.

Another building material that contributed to water ingress was the widespread use of oriented strand board (“OSB”) as sheathing under the exterior siding or cladding. OSB did not cause water infiltration, but was much more susceptible to deterioration from water and less able to breathe than plywood or boards, which was the standard sheathing material used in prior construction.

The use of these techniques and building materials reflected the adoption of face-sealed building envelope construction, which creates an impermeable membrane intended to prevent water from entering into the walls of a building. When water enters a face-sealed system, there is no method for water egress or sufficient drying of the building materials. Increased sealing of the walls prevents the walls from “breathing” and drying out in warmer months, resulting in deterioration, rot, and mould.

(B) Changes in Building Codes and Bylaws which Permitted Unsuitable Design and Construction

The *BC Building Code* and the *VBB* are based upon the *National Building Code of Canada* (the “*National Code*”). Since the 1970s and early 1980s, the *National Code* has been progressively amended to require greater sealing of exterior walls to prevent infiltration of moisture vapour from the interior of the building.⁷ These changes are consistent with a face-sealed design.

In cold, dry climates, vapour infiltrating into exterior wall insulation causes condensation and significantly reduces insulation performance while increasing energy consumption. Changing to a face-sealed design was appropriate for most of Canada, which experiences cold and dry winter climates. However, a face-sealed design is not suitable for use in a temperate rain forest as increased sealing of walls prevents the walls from breathing and drying out in warmer months.

Another by-law change contributed to the leaky condo crisis. In the 1980s, the City of Vancouver changed its zoning by-laws to include roof overhangs in the amount of permitted floor area known as floor space ratio (“FSR”).⁸ This amendment impacted the amount of buildable and salable space by including roof overhangs in the calculation of FSR.

As this inclusion reduced the amount of permitted floor space available to developers and builders, roof overhangs were often removed from designs. The calculation of FSR from the

⁷ Canada, National Research Council of Canada: Institute for Research in Construction, “Construction Technology Update No. 41: Low-Permeance Materials in Building Envelopes”, (Ottawa: National Research Council of Canada, 2002).

⁸ *Barrett Commission, supra* note 6 at Chapter Two, II.

outside of the building envelope, instead of from the centre or interior side of the wall, also tended to promote thinner walls. Open, uncovered walkways were excluded from the FSR, thus encouraging their inclusion in building design. These design changes were more likely to allow water ingress.

(C) Lack of Awareness Regarding Principles of Designs Suitable for a Temperate Climate

The Lower Mainland and southern Vancouver Island regions have a temperate climate that experiences extended periods of cool, damp, overcast, and rainy weather. Greater Vancouver receives approximately 166 days and 1,199 mm of rain per year,⁹ approximately double that of London, England and more than quadruple that of Los Angeles, California.¹⁰ With an average high summer temperature of 22 degrees Celsius, buildings in Vancouver dry out much less quickly, or not at all, compared to buildings in southern California or Mediterranean climates with higher summer temperatures. Prior building design in coastal British Columbia provided greater protection from the damp and rainy climate through the use of features such as overhanging roofs, which protected the walls below from direct rain contact.

(D) Lack of Meaningful Inspection at Critical Stages of Construction and Workmanship Issues

The success of a face-sealed system is contingent on surface continuity, proper workmanship and good materials. These factors were largely lacking during British Columbia's building boom.

There was also a lack of meaningful inspection by design professionals at critical stages of construction. Prior to 1992, architects and engineers were not required to certify that their designs met the requirements of the building codes nor were they required to review the quality of construction or certify that construction had been performed in accordance with the *BC Building Code* or *VBB* and permitted drawings, and specifications, including those relating to providing a weather-tight building envelope.¹¹

As design professionals were not required to perform such reviews during construction, developers looking to save costs would not retain them to do so. This left the obligation for design interpretation and quality construction to the developers or builders, who either lacked experience to do so and/or had a financial incentive to cut costs and eliminate such reviews.

The building boom was also complicated by a lack of effective regulation regarding fee competition amongst design professionals, which contributed to significantly reduced professional fees paid to architects and engineers. As a result, in some cases, less attention was given to careful detailing of construction drawings, particularly in envelope details for flashing and sealing of joints and edge conditions at windows and doors. The previously standard practice of architects monitoring construction trades on a building project was reduced or eliminated. This was particularly problematic because the building boom attracted new and inexperienced workers often unfamiliar with good construction practices.

⁹ Statistics Canada, "Weather conditions in capital and major cities (Precipitation)" (Ottawa: Statistics Canada), online: <www.statcan.gc.ca>.

¹⁰ *Ibid.*

¹¹ British Columbia, Ministry of Public Safety and Solicitor General, "Guide to the Letters of Assurance to the B.C. Building Code 2006 5th Ed.", (Victoria: Ministry of Public Safety and Solicitor General, 2010) at 3.

(E) *Inadequate Regulatory System and Warranty Program*

The leaky condo crisis arose due to ineffective regulation with respect to responsibility in every stage of the construction process, including lack of government monitoring, lack of developer/builder/contractor responsibility, lack of professional responsibility by architects translating design into physical structures, and lack of ensuring quality construction of the building envelope by architects and engineers.

Another contributing factor to the large-scale nature of the crisis following construction was an inadequate home warranty program.

The New Home Warranty of British Columbia Inc. (“New Home Warranty of BC”) program was a voluntary warranty program created by the provincial residential construction industry in 1976. New Home Warranty of BC had a monopoly until National Home Warranty of Alberta entered the British Columbia market as a qualified alternate provider in the late 1990s. Neither program was subject to provincial regulations beyond the *Corporations Act*.¹²

At the height of the leaky condo crisis in April 1999, the construction industry-run and financed New Home Warranty of BC collapsed. New Home Warranty of BC was the largest provider of new-home warranty coverage in the province and the main source of warrantees against construction defects for home buyers. Following the collapse of New Home Warranty of BC, litigation was the only potential avenue of recompense for affected homeowners.

III. **Aftermath of the Leaky Condo Crisis**

The leaky condo crisis created new organizations dedicated to the research of building envelope issues and spawned four major inquiries including two by the Canada Mortgage and Housing Corporation (“CMHC”) and two by former British Columbia premier, Dave Barrett, who was appointed by the province of British Columbia.

Building Envelope Research Consortium

In 1995, the Building Envelope Research Consortium (“BERC”) was established through an initiative of CMHC to act as a coordinating agency for the research of building envelope issues in British Columbia. Participants included federal, provincial and municipal agencies, professional associations, the University of British Columbia schools of architecture and civil engineering, the British Columbia Institute of Technology, a private sector research company, development and construction industry associations, trades unions, contractors and materials suppliers and associations and financing and insurance agencies.

In 2003, BERC merged with the British Columbia Building Envelope Council (“BCBEC”) and was renamed the Building Research Committee (“BRC”).

Canada Mortgage and Housing Corporation Survey

In 1996, CMHC released its *Survey of Building Envelope Failures in the Coastal Climate of British Columbia*.¹³ It undertook a study of 37 “problem” buildings, defined as those with a

¹² *Barrett Commission, supra* note 6 at Chapter Two, VIII. Warranty Programs; *Canada Corporations Act*, R.S.C. 1970 c. c-32 at s.5.

¹³ CMHC, “Survey of Building Envelope Failures in the Coastal Climate of British Columbia” (Ottawa: Canada Mortgage and Housing Corporation, 1998), online: <www.cmhc-schl.gc.ca>.



moisture problem within the walls, decks or exterior framing resulting in damage requiring \$10,000 or more to repair and incorporating a variety of materials in exterior wall components. Nine “control” buildings were also studied, defined as buildings which had not experienced moisture problems for at least five years.

The recommendations, several of which would be echoed in later reports, included greater clarity in design strategies, improvement in details, envelope quality management protocol, training of trades in building envelope construction, use of rainscreen systems and guidance for maintaining exterior wall systems.¹⁴

1998 Barrett Commission

In April 1998, a *Commission of Inquiry into the Quality of Condominium Construction in the Province of British Columbia*,¹⁵ commonly referred to as the Barrett Commission, was established. The Barrett Commission’s mandate was to inquire into the leaky condo crisis.

The Barrett Commission held public hearings, which included presentations from condominium owners and representatives from different sectors of the residential construction industry and over 700 written submissions. The report was issued June 16, 1998.¹⁶

82 specific recommendations were made, including changes to zoning regulations, building codes, provincial law, federal law, financing, contractor licensing, requirements for design professionals, the establishment of a Compensation Fund for reconstruction and the creation of the provincial Homeowner Protection Office.¹⁷

1999 – 2000 Barrett Commission

In 1999, a second *Commission of Inquiry into the Quality of Condominium Construction Part II*¹⁸ was established following the collapse of the New Home Warranty of BC program. The commission had a mandate to:

- Determine the harm caused by the collapse of New Home Warranty of BC to individual condominium owners and the resulting financial and economic impact on consumers, the housing market and the economy;
- Review existing financial support programs for homeowners; and
- Examine the role of CMHC in mortgage loan insurance and its relationship to financial institutions.

The *Barrett Commission’s* findings were published in two volumes in January and March 2000.¹⁹ The recommendations included 100% compensation for up to \$25,000 per unit for repairs, with

¹⁴ *Ibid.*

¹⁵ *Barrett Commission, supra* note 6.

¹⁶ *Ibid* at Executive Summary.

¹⁷ *Ibid* at Chapter Three, III. Recommendations.

¹⁸ Dave Barrett, British Columbia Commission of Inquiry into the Quality of Condominium Construction in British Columbia, *The Renewal of Trust in Residential Construction Part II*, (Victoria: Government of British Columbia, 2000) [*Barrett Commission Part II*].

¹⁹ *Barrett Commission Part II, supra* note 18.



costs to be shared equally between the provincial and federal governments and the provincial condominium construction industry.²⁰

IV. Stakeholder Responses to the Leaky Condo Crisis

There were various stakeholders in the leaky condo crisis, including several levels of government, the construction industry, design professionals and insurers.

Following the CMHC inquiries and the *Barrett Commissions*, the British Columbia provincial government and municipalities of the Lower Mainland responded in a number of ways, including: new homeowner protection programs and amendments to the *BC Building Code* and *VBB* requirements.

Government Response: New Homeowner Protection

In 1998, the British Columbia government implemented the *HPA*. This legislation was designed to protect homebuyers and improve the quality of residential construction.²¹ It also established the Homeowner Protection Office (“HPO”), a provincial Crown corporation responsible for:

- Licensing builders and monitoring the provision of compulsory third party home warranty insurance;
- Mandatory registration of residential contractors with an approved warranty insurance provider;
- Administering a no-interest repair loan programme available to qualified owners of leaky homes; and
- Operating a research and education program.

The *HPA* provides financial assistance to eligible homeowners for water ingress occurring as a result of premature building envelope failure. CMHC insured the loans for no fees or premiums and the HPO paid interest on behalf of the homeowner to the lender warranty program.²²

In 1998 approximately 60% of all new housing units were carrying warranty protection.²³ By 2000 the HPO was involved with approximately 500 condominiums containing nearly 32,000 residential units.²⁴

The key elements of the statutory warranty scheme under the *HPA* include:²⁵

- An implied warranty that the home is reasonably fit for habitation, has been constructed from materials that are of good quality and reasonably fit for the purpose, and that the home was designed or constructed with ordinary competence, skill and care;

²⁰ *Ibid.*

²¹ “Interim Report of the Project Committee on New Home Warranties”, *British Columbia Law Institute* (2000), online: <www.bcli.org> at 8.

²² “Continuing Legal Education Seminar: Leaky Condos” (Materials delivered at the Continuing Legal Education Seminar, Vancouver, 9 February 1999) at 1.1.01-1.1.03 [*CLE Seminar*].

²³ *Barrett Commission*, *supra* note 6 at Chapter Two, VIII. Warranty Programs.

²⁴ New Zealand, Parliamentary Library of New Zealand, “Background Note: Leaky Buildings”, (Wellington: Parliamentary Library of New Zealand, 2002), online: < www.parliament.nz> at 22.

²⁵ *HPA*, *supra* note 2 at s. 22-23; *CLE Seminar*, *supra* note 22 at 2.1.04-2.1.1.05.

- The warranty attaches to the residential builder, including the developer and general contractor, and the vendor of a new home. The warranty cannot be waived, excluded, limited or qualified by any contract;
- A mandatory “2/5/10” home warranty, which requires insurance coverage for two years on materials and labour defects, five years on building envelope defects and 10 years on structural defects;
- Warranty coverage is provided by private insurance companies; and
- The coverage extends to the purchaser of any new home unless the home was built by an owner-builder or the home is exempt by regulation.

Previous warranty schemes provided one year coverage for materials and labour and five years coverage for structural defects. There was no coverage for damage resulting from water ingress. The provisions of the *HPA* were meant to address this omission.

Prior to the introduction of the *HPA*, design professionals were often left “holding the bag” for the developer and/or builder’s proportionate share of responsibility when those parties had no insurance or assets. The warranty coverage available under the *HPA* mitigates the risk of claims against design professionals by providing secure and statutory mandated avenues for homeowners to pursue remediation costs against developers, general contractors and/or the warranty provider.

British Columbia Building Code and Vancouver Building By-Law Amendments

Commencing in 1997, Vancouver, Richmond and New Westminster began to implement their own prescriptive requirements for building envelope design and construction in multi-unit residential buildings.²⁶ The two most significant items were requirements for:

- Rainscreen construction of exterior walls; and
- Professional certification of the design and the introduction of the “building envelope professional”. These items were later incorporated into the 2006 edition of the *BC Building Code*.

(A) Rainscreen Construction

A rainscreen is the weather-facing surface of an exterior wall that stands off from the moisture-resistant surface of the main wall. There is a gap or cavity between the outermost layer, or rainscreen, and the main wall which prevents infiltration of moisture into the main wall assembly and allows air to circulate in between.

Rainscreen wall assemblies became the construction standard both for the rehabilitation of leaky buildings and the construction of new buildings. Rainscreen technology provides ventilation and a space cavity between walls for accumulated moisture to dry without affecting building materials. Allowing sufficient drying is essential to ameliorating water ingress damage.

²⁶ *Barrett Commission, supra* note 6 at Chapter Two, II. Building Codes.

(B) *Introduction of the Building Envelope Professional*

One of the primary recommendations of the *Barrett Commission* was to require that “[a]ny architect or engineer involved in Letters of Assurance and the field review process must have the qualifications, or sub-contract the building envelope design and review to a qualified Building Envelope Specialist”.²⁷

In 1995, prior to the *Barrett Commission*, the City of Vancouver established a list of “Building Envelope Specialists” (“BES”), comprised of architectural and engineering firms deemed qualified to provide independent inspection and review of building envelope components, based on the city’s perception of the firm’s qualifications and experience.

The City of Vancouver required these professionals to be retained by the owner/developer to provide Letters of Assurance. Other municipalities in the Lower Mainland soon followed Vancouver’s lead. It was recognized that the BES list was a temporary measure until a more permanent regime was established.²⁸

In 1996, the Architectural Institute of British Columbia (“AIBC”) launched a Building Envelope Education Program for its members.²⁹

In 1999, a joint committee of the AIBC and the Association of Professional Engineers and Geoscientists of British Columbia (“APEGBC”) developed a formal designation: the BEP. A joint accreditation process and procedures manual for the BEP was created and the BES list was discarded as recognition was transferred to the BEP list.³⁰

A BEP may be either an architect or a professional engineer. Their role is to support the architect of record through design review and enhanced field review for aspects of the building envelope contained in the *BC Building Code*.³¹

Scope of Responsibilities and Liability for Building Envelope Professionals

“Building Envelope Professional” is not an official designation, but rather a term within the design and construction industry indicating architects or engineers that are competent to provide “enhanced building envelope services”.³² AIBC and APEGBC published a Bulletin outlining the appropriate professional practice for the provision of enhanced building envelope services by a BEP.³³

²⁷ *Barrett Commission, supra* note 6 at Chapter Three, III. Recommendations, Recommendation 11.

²⁸ David G. Kayll, “The Role of the Building Envelope Professional in the Aftermath of Vancouver’s Leaky Condominium Crisis” (Paper delivered at the Proceedings for Performance of Exterior Envelopes of Whole Buildings VIII: Integration of Building Envelopes, Florida, December 2001).

²⁹ *CLE Seminar, supra* note 22 at 5.1.03.

³⁰ Mark Lawton and David Ricketts, “Guidelines for the Practice of Building Enclosure Engineering”, *Building Research Information Knowledgebase*, online: <<http://www.brikbases.org>> at 4.

³¹ “Bulletin 34: Building Envelope Services- Appropriate Professional Practice”, *Architectural Institute of British Columbia and Association of Professional Engineers and Geoscientists of British Columbia* (April 2007, updated August 11), online: <<http://www.apeg.bc.ca>> [*Bulletin 34*].

³² *Bulletin 34, supra* note 31 at 1.

³³ *Bulletin 34, supra* note 31.



At present, most new construction projects for multi-family residential buildings require a BEP as a member of the design and construction team. The City of Vancouver requires a BEP to participate in the design and construction of building envelopes on new and rehabilitated residential buildings.³⁴

Enhanced building envelope services involve the review of the building envelope design and construction pertaining to environmental separation and the materials and components of the building envelope. Review of air, moisture and precipitation control is required pursuant to the *BC Building Code*.³⁵

During the conceptual design phase, a BEP may attend meetings with the design team, review design for air, moisture and precipitation and review applicable codes and regulations affecting the performance of the building envelope.³⁶

During the design development phase, a BEP may review preliminary drawing of building envelope elements, review durability of building envelope elements and consider the resistance of materials to deterioration.³⁷

During the contract documents phase, a BEP may review construction documents, verify that building elements achieve performance criteria and complete, sign and seal Model Schedule D, which is submitted to the Architect of Record.³⁸

The AIBC and APEGBC strongly recommend that BEPs sign and seal assurance letters in Schedule D and C-D for field design review when enhanced building envelope services are provided.³⁹

Model Schedule D is not a Letter of Assurance required by the *BC Building Code*. In practice, BEPs do not always submit a Model Schedule D. BEPs are not required to submit any other Letters of Assurance for design and field review; rather, those Schedules are signed by the Coordinating Registered Professional, Architect of Record or Engineer of Record.

The BEP's enhanced field review does not replace the field review requirements of the architect and other consultants.⁴⁰ Design and field review of building envelope with corresponding assurances under the applicable building codes remain the responsibility of the project architect and other project consultants.⁴¹

Professional Status of Building Envelope Professionals

Due to a Court challenge, BEPs are not a formally recognized professional designation.⁴²

³⁴ David G. Kayll and Joel Schwartz, "Building Envelope Performance: What to Expect When You are Expecting" (Paper delivered at the 10th Canadian Conference on Building Science and Technology, Ottawa, May 2005) at 61 and 71.

³⁵ *Bulletin 34, supra* note 31 at 3.

³⁶ *Bulletin 34, supra* note 31 at 3.

³⁷ *Bulletin 34, supra* note 31 at 3-4.

³⁸ *Bulletin 34, supra* note 31 at 4.

³⁹ *Bulletin 34, supra* note 31 at 7.

⁴⁰ *Bulletin 34, supra* note 31 at 5.

⁴¹ *British Columbia Building Code 2012* at 2.2.7.3(2)-(3) [*BC Building Code*].

⁴² *Morton v Joint Building Envelope Qualifications Committee*, 2000 BCSC 1214.



In *Morton v. Joint Building Envelope Qualifications Committee*, Mr. Morton sought to set aside a decision of the Judicial Building Envelope Qualifications Committee of the AIBC and APEGBC, which denied him accreditation as a BEP.

In 1999, AIBC and APEGBC developed the Committee to administer the accreditation program for BEPs. Applicants were required to be a member of AIBC or APEGBC, have a certain level of experience, have completed an education program and pay an annual fee.

Mr. Morton was denied accreditation as a BEP. He challenged the jurisdiction of the AIBC and APEGBC to recognize and accredit BEPs.

The Court held that AIBC and APEGBC did not have authority in their respective enabling legislation to establish such an accreditation scheme and neither organization had the authority to grant or decline accreditation.

Although the Court recognized the important, public-protection mandate underlying the BEP designation program, a self-governing profession is limited to the authority conferred upon it by its enabling legislation.

From a liability perspective, the fact that BEPs are not a recognized professional designation reduces the reliance and responsibility that can be placed upon them by other design professionals during the design and review process. The BEP's review does not replace or reduce the professional requirements imposed upon the project architect and other consultants.

Political Effects and Financial Assistance

The enormity of the leaky condo crisis has affected all levels of government in British Columbia and Canada.

In 1998, the British Columbia government initiated an interest-free loan program to assist homeowners with building envelope repairs. It was administered through the HPO and approved more than \$670 million in loans from during its decade of operation. The loans were financed through a levy on new residential projects. The program was discontinued in 2009 following the economic downturn.⁴³

In 1999, the B.C. government announced a provincial grant and tax relief program to assist homeowners affected by the crisis.⁴⁴ The Premier of British Columbia also called on the federal government to offer tax relief on repairs.⁴⁵

By 2001, the British Columbia government estimated that leaky condo repairs had cost approximately \$1.5 billion.⁴⁶

In 2005 and 2006, the Prime Minister of Canada made a commitment to provide financial aid to homeowners affected by the crisis. To date no financial assistance has been provided by the federal government.⁴⁷

⁴³ "B.C. leaky-condo fund dries up", *CBC News* (31 July 2009) online: <<http://www.cbc.ca>>.

⁴⁴ "Tax relief program for leaky condo owners", *CBC News* (28 June, 1999) online: <www.cbc.ca>.

⁴⁵ "Tax relief program for leaky condo owners", *CBC News* (28 June, 1999) online: <www.cbc.ca>.

⁴⁶ Derek Penner, "Leaky condo crisis rears its head again in B.C.", *The Vancouver Sun* (25 May 2014) online: <www.vancouversun.com>.



Leaky Condo Litigation

The leaky condo crisis spawned a litigation cottage industry. Legal claims for building envelope failures were made against developers, design consultants, architects, engineers, general contractors, sub-contractors, building trades and local government.

These claims generally resulted in mediated settlements for 40% to 60% of the value of the claim. The incomplete nature of compensation resulted from a combination of factors, including insolvent developers and contractors, exhausted insurance benefits as a result of design professionals being named as “serial” defendants to claims, the insurance industry response generally and the uncertainties of full economic recovery.

Insurance Industry Response to Leaky Condo Claims and Litigation – Introduction of the Water Ingress Endorsement

As a result of the large volume of claims against design professionals and high cost of litigation, the insurance industry responded to limit their risk and minimize exposure for these claims. The result was a water ingress endorsement, the language of which evolved from an absolute exclusion for water ingress claims to an exclusion of more limited application.

The initial absolute exclusion was evidenced by the following type of wording:

Underwriters shall not be liable to pay any Defence Costs or Damages or make Supplementary Payments for any Claim which is, in whole or in part, arising directly or indirectly out of the Penetration of Moisture into the Building Envelope of a Multi-Unit Building located in the Lower Mainland, Vancouver Island, or Skeena regions of the Province of British Columbia which includes its territories or possessions.

For the purposes of this Exclusion, the following definition is added to the Policy:

Penetration of Moisture means, but is not limited to, the actual, alleged, threatened, or possible infiltration, migration, presence, accumulation, condensation or dispersal of water, precipitation, or moisture on, in, or into the Building Envelope.

Building Envelope means the assemblies, components, and materials of a building which are intended to separate and protect the interior space of a building from the adverse effects of exterior climactic conditions.

Multi-Unit Building means a building containing more than four units that are utilized for residential, commercial, industrial, or any other purposes.

Over time, presumably as other protective measures were implemented, the language of the standard absolute exclusion evolved to provide limited coverage for claims arising from contracts made after July 1, 1999. Claims arising from contracts made prior to this date remained entirely excluded.

⁴⁷ “Tories pushed over leaky condos”, *The Vancouver Sun* (19 September, 2006), online: <www.canada.com>.



The more limited coverage available for claims arising from contracts made after July 1, 1999 was reflected in the following language:

BRITISH COLUMBIA WATER INGRESS ENDORSEMENT

INFILTRATION OF PRECIPITATION EXCLUSIONS AND MODIFICATIONS ENDORSEMENT

For the purpose of this endorsement only, it is agreed that the DEFINITIONS section of the Policy is amended to include the following Definitions:

BUILDING ENVELOPE means the assemblies, components and materials of a building which are intended to separate and protect the interior space of the building from the adverse effects of exterior climatic conditions.

DWELLING UNIT means a suite operated as a housekeeping unit, used or intended to be used as a residence or usually containing cooking, eating, living, sleeping and sanitary facilities.

INFILTRATION OF PRECIPITATION means, but is not limited to, the actual, alleged, threatened or possible infiltration, migration, presence, accumulation, condensation or dispersal of water or moisture on, in or into the Building Envelope.

MULTI-UNIT RESIDENTIAL BUILDING means a residential building containing more than two Dwelling Units, excluding the following classes of buildings (unless such buildings are strata titled):

- (a) hotels and motels;
- (b) dormitories;
- (c) care facilities;
- (d) floating homes;
- (e) a multi-unit building owned under a single title and constructed for rental purposes other than as part of a provincial social housing program;
- (f) a multi-unit building which is strata-titled with all the Dwelling Units held under one ownership and constructed for rental purposes, provided that a restrictive covenant is registered on the title restricting the sale or other disposition of any Dwelling Units for 10 years from the date of first occupancy of a Dwelling Units in the building;
- (g) new homes built under provincial social housing programs.

It is also understood and agreed that the EXCLUSIONS section of the policy is amended to include the following:

...

15 (u) Infiltration of Precipitation Claims

– Multi-Unit Residential Building – Contracts after July 1, 1999

This Policy does not provide coverage for, pay damages resulting from, provide a defence to or make supplementary payments for any Claim or Circumstance involving any Multi-Unit Residential Building for which the Insured contracted to provide professional services that relate in any way to a Building Envelope after July 1, 1999 which Claim or Circumstance involves in whole or in part, directly or indirectly arises out of, results from, is based upon, related to, connected with,



contributed to or aggravated by Infiltration of Precipitation on, in or into the Building Envelope of a Multi-Unit Residential Building on any project which is located in the following geographical areas:

British Columbia Lower Mainland or Lower Vancouver Island (more specifically any project located within the area encompassed by a line drawn from the Canada/U.S. border south of Chilliwack Lake, northerly to and including the Town of Hope, then northwesterly to and including the Town of Whistler, then westerly to and including the Town of Campbell River, then southwesterly to and including the Town of Tofino, then southeasterly along the seacoast to connect with the Canada/U.S. Border, and then easterly along the border back to the starting point south of Chilliwack Lake). This exclusion shall apply notwithstanding that the Claim or Circumstance is alleged to include other perils insured against in this Policy which may have actually or allegedly, in whole or in part, directly or indirectly contributed concurrently or consecutively or in any sequence to the Claim or Circumstance.

Exceptions

This exclusion shall not apply where the professional services provided by the Insured were for the evaluation, investigation or initial study of an existing Building Envelope, which did not include specific remediation design. This Exclusion shall further not apply to any Claim or Circumstance if each and every of the five conditions set out below are satisfied:

1. One or more of the following standard contracts as applicable must be in place between the Insured and the client respecting the building subject of the Claim or Circumstance:
 - a) Canadian Standard Form of Agreement between Client and Architect DOCUMENT SIX (1997 or 2002 Edition); Canadian Standard Form of Agreement between Client and Architect DOCUMENT SEVEN (abbreviated version, 1997); or, Canadian Standard Form of Agreement between Architect and Consultant DOCUMENT NINE (1997 Edition); or, AIBC Standard Form of Agreement between Client and Architect and Consultant DOCUMENT NINE (1997 Edition); or,
 - b) AIBC Standard Short Form of Agreement between Client and Architect DOCUMENT EIGHT FIRST EDITION – FEBRUARY 1990 or MARCH 2001; or,
 - c) ACEC Document 31 Prime Agreement Between Client and Engineer (copyright 1996); or,
 - d) any other standard form of contract used by you or your client.
2. A minimum of one consultant on the project must be a Building Envelope professional to provide enhanced building envelope design services as recognised by the designated regulatory bodies for architects or engineers in British Columbia.
3. The Insured's contract for services with the client must contain the following clause or a clause with a similar intent:

'The Architect/Engineer shall make such visits to the project site at intervals appropriate to the stage of construction as the Architect/Engineer, in his sole professional discretion, considers necessary to enable him to ascertain whether the Contractor is carrying out the work in general conformity with the Contract Documents for the project'.



4. For new construction projects only, Home Warranty Insurance as legislated by the *Homeowner Protection Act*, SBC 1998, c. 31 must be placed with a minimum warranty coverage of two (2) years on labour and materials, five (5) years on the Building Envelope (including water penetration), and ten (10) years on structure.
5. For remediation projects only, the contract between the Insured and the client must limit liability to the client as follows:
 - a) for the same time period as that provided by the Home Warranty Insurance where such insurance is legislated by the *Homeowner Protection Act*, SBC 1998, c. 31 or for a period of two (2) years where no such insurance is placed; and,
 - b) for a maximum value of the cost of construction or the unimpaired Limits of Liability available under the Policy to the Insured as is set out in item 4 of the Declarations, whichever is less.

Alternatively, rather than exclude water ingress coverage entirely, some insurers offered select coverage for water ingress claims with a sub-limit much lower than the overall limit of the policy. Other insurers excluded coverage for mould-related claims on architects' policies. Another strategy was to keep full coverage in place and increase premiums and self-insured retentions.

The result of these coverage changes was to leave design professionals without full errors and omissions coverage for water ingress claims.

VI. Water Ingress Then and Now

(A) Current Construction Industry Standards

Following the leaky condo crisis, construction industry standards evolved. These new standards are reflected in the *BC Building Code* and *VBB*. Some of these new standards include:

- Homebuilders must be licensed by the HPO in order to construct new homes and must meet professional standards established by the government;⁴⁸
- The *VBB* incorporates *BC Building Code* requirements;⁴⁹
- The *BC Building Code* stipulates additional review to be performed by a BEP, including conducting reviews and providing letters as required for buildings or portions of buildings with a cladding system over wood framing or light steel framing and on residential buildings within the scope of Part 5;⁵⁰
- A BEP “shall”, prior to the issuance of a building permit, provide the Chief Building Official with a completed, signed and sealed commitment letter in the form attached as Schedule D-1;⁵¹

⁴⁸ *CLE Seminar*, *supra* note 22 at 5.1.04.

⁴⁹ City of Vancouver, By-Law No 10908, Building By-Law [*VBB*] at s. 1.1.

⁵⁰ *VBB*, *supra* note 49 at s. 5.1.2.2(1).

⁵¹ *Ibid* at s. 5.1.2.2(2).

- A BEP “shall”, prior to the issuance of an occupancy permit, provide the Chief Building Official with a completed signed and sealed completion letter in the form attached as Schedule D-2,⁵²
- The *BC Building Code* governs the current construction standards for building envelopes⁵³ and stipulates requirements for environmental separation issues including sealing, air leakage, vapour diffusion;
- With respect to air leakage, an air barrier must be installed to provide resistance to air leakage and specified requirements for the air barrier system, including maximum leakage rates,⁵⁴
- A vapour barrier must be installed to provide resistance to water vapour diffusion, including specific requirements for the vapour barrier to promote reduction in the likelihood of condensation within building assemblies and diminish the potential of materials deteriorating or mould,⁵⁵
- Materials, components, assemblies and joints in materials, junctions between components and junctions between assemblies that are exposed to rain shall be either sealed to prevent ingress of precipitation or drained to direct precipitation to the exterior,⁵⁶
- Buildings specifically designed to accommodate the accumulation of water or the ingress of water need not be graded, catch basins need not be installed and foundation walls do not need to be constructed to ensure surface water will not enter the building or will not damage moisture-susceptible materials,⁵⁷
- Components and assemblies used must provide protection from the ingress of precipitation,⁵⁸ and
- Drainage is required to direct moisture to the exterior where rain is likely to penetrate the exterior wall. Where exterior loads of precipitation are greater, the *BC Building Code* states that rainscreen assemblies are typically used.⁵⁹

The *BC Building Code* also imposes additional requirements upon the “registered professional of record”, being either the project architect or engineer, to place their professional seal on plans submitted in support of a building permit⁶⁰ and provide a letter of assurance in the form of Schedules B and C-B to assure that the components of the project substantially comply with the plans and supporting documents prepared by the registered professional of record and the requirements of the *BC Building Code*.⁶¹

⁵² *Ibid* at s. 5.1.2.2(3).

⁵³ *BC Building Code*, *supra* note 41 at Part 5, Division B.

⁵⁴ *BC Building Code*, *supra* note 41 at s. 5.4.1.1(2), Appendix-5.4.1.1 and Tables A-5.4.1.2.(1) and (2).

⁵⁵ *BC Building Code*, *supra* note 41 at s. 5.5.1.1.

⁵⁶ *BC Building Code*, *supra* note 41 at s. 5.6.2.1.

⁵⁷ *BC Building Code*, *supra* note 41 at s. 5.7.1.1(3).

⁵⁸ *BC Building Code*, *supra* note 41 at Appendix- 5.6.1.1.

⁵⁹ *BC Building Code*, *supra* note 41 at Appendix- 5.6.2.1.

⁶⁰ *BC Building Code*, *supra* note 41 at s. 2.2.7.3(2)-(3).

⁶¹ *Ibid*.

(B) *Claims Today*

Since the introduction of rainscreen technology and the amendments to the *BC Building Code* and *VBB*, studies have been conducted to assess whether rainwater leaks continue to cause damage.⁶² These studies have shown that although rainwater leaks may still cause damage within the rainscreen itself, the drained and ventilated cavity of the rainscreen wall reduces the likelihood of moisture coming into contact with sensitive materials.

Although not 100% effective (no system can be), rainscreen technology is highly effective in reducing moisture accumulation and damage from water ingress to materials in the wall assembly.⁶³ Buildings constructed with rainscreen walls are more tolerant to moisture and can balance wetting and drying to a level that can be accommodated by the building materials.⁶⁴

Given the new construction requirements and safeguards in place, buildings are generally better constructed and claims, overall, are less. Although water ingress is often still raised as an issue in claims against design professionals, the claims generally are no longer based on the systemic widespread failure of the building envelope but rather specific construction defects particular to the design or building.

If claims are to arise, it is more likely that such claims will originate, not from rainscreen construction, but rather from earlier faceseal construction. Commentators have noted there is the potential for a “second wave” of leaky condos due to the fact that many buildings were not initially repaired, which is attributed to the cancellation of the loan program,⁶⁵ and the fact that strata corporations are now legislated to complete depreciation reports to assess their building’s condition.⁶⁶

To date, there has not been a large number of new leaky condo claims. However, many strata corporations have deferred the preparation of “mandatory” depreciation reports (as a result of a legislative loophole⁶⁷) so the true condition of these buildings remains unknown.

Another type of claim presently being faced by design professionals, which may raise water ingress issues, includes being named as a defendant or third party in a warranty claim made by a homeowner or strata corporation against the warranty provider for a denial of coverage under the warranty. These claims may include water ingress but often do not.

⁶² Marcus J. Dell, Graham Finch and Brian Hubbs, “Rainscreen Walls: Long-Term Performance and Field Monitoring in Coastal British Columbia” (Paper delivered at the Symposium on Building Envelope Technology, Vancouver, 2008). This report was the result of five years of data from monitoring the seasonal wetting and drying trends of five buildings constructed with rainscreen walls in Vancouver B.C. The initial monitoring project was implemented by RDH Building Engineering, CMHC, the HPO and BCHMC. The purpose of the study was to understand how rainscreen wall assemblies have performed in Vancouver. Five new or rehabilitated multi-unit buildings constructed with rainscreen walls in Vancouver were selected to be monitored. The temperature, relative humidity, moisture content, relative wetness and pressure differential across the wall assemblies were all monitored.

⁶³ Dell, *supra* note 62.

⁶⁴ Graham Finch, Brian Hubbs and John Straube, “Hygrothermal Performance and Drying Potential of WoodFrame Rainscreen Walls in Vancouver’s Coastal Climate”, (Paper delivered at the 11th Canadian Conference on Building Science and Technology, Alberta, 2007).

⁶⁵ Penner, *supra* note 46.

⁶⁶ *Strata Property Act*, S.B.C. 1998, c. 43, s. 94.

⁶⁷ *Ibid*, s. 94(3)(a).



In these claims, the warranty claim is advanced in contract against the warranty provider, while the homeowner also advances a negligence claim against the design professionals. As none of these claims have gone to trial, the Court’s assessment of the relationship, and proportionate liability, between the contractual warranty provisions and the tort duties owed by a design professional have not yet been considered.

Arguments have been made, with mixed success,⁶⁸ with respect to the appropriateness of mingling contract and tort claims against warranty providers and design professionals. Generally, the Courts prefer to encourage the “just, speedy and inexpensive determination of a proceeding on its merits” which, according to most judicial interpretations, includes hearing these types of claims together.⁶⁹

(C) *Prudent Underwriting Practices*

Although mitigated, it is impossible to eliminate all potential risks; claims will continue to occur. Building envelope professionals will continue to be a prime target for any type of water ingress claim. Prudent underwriting practices will assist in minimizing the risk of providing liability insurance for these professionals. To this end, Underwriters should ask:

- How much time the building professional plans to spend performing building envelope work;
- Find out if the building professional qualifies as a building enclosure professional and is familiar with the applicable bulletins and guidelines issued by AIBC and APEGBC;
- Confirm the building professional is familiar with *BC Building Code* and *VBB* requirements with respect to rainscreen construction and the requirements associated with providing enhanced building envelope services; and
- Confirm if the building professional will be performing new construction or remediation of older leaky buildings.

VII. Conclusion

Given the unprecedented legislative and policy response to the leaky condo crisis, including the introduction of new construction standards, warranty regimes and professional oversight mandated by the introduction of the BEP, it is unlikely that a further leaky condo crisis will occur in British Columbia, at least to the same scale as that seen in the 1980s to 2000s.

Although, insurers may take comfort in the fact that water ingress claims against design professionals have been minimized to a great extent, the prospect for water ingress claims has not been eliminated entirely. This risk can likely be managed through prudent underwriting and risk management practices, rather than the expansion or re-addition of the water ingress exclusion to professional liability policies.

⁶⁸ *The Owners, Strata Plan BCS 1348 v. Travelers Guarantee Company of Canada*, unreported decision of Master Tokarek, Reasons for Judgment dated 14 April, 2014 and *The Owners, Strata Plan 4249 v. Travelers Insurance Company of Canada*, 2015 BCSC 172.

⁶⁹ *Atlantic Waste Systems Ltd. v. Canada (Attorney General)*, 2014 BCSC 1830 at para. 9.

