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Leaky condo disaster was foretold

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Dire warnings of a potential leaky condo-style disaster were made nearly 25 years ago by researchers to top brass at Canada's national housing agency, confidential and restricted government documents reveal.

But even before disclosing those concerns to the general public or housing industry professionals, the focus soon shifted to the potential political, economic and legal implications.

More than 300 pages of memorandums, studies and management committee records obtained through a freedom-of-information request to the Canada Mortgage and Housing Corporation paint a detailed picture of what senior bureaucrats and top-ranking politicians knew about moisture-related problems with housing and when they became aware of it.

Leaky condo litigant Dan Healey has long claimed that the CMHC, the federal government department responsible for housing-related research, should have waved a red flag years in advance of B.C.'s housing construction disaster based on warnings from its own researchers.

These early warnings, according to these newly obtained documents, date back to 1981. But despite these well-researched findings, little changed and the CMHC even had problems with its own buildings.

"If a Crown corporation couldn't get it right, what chance did other builders, architects and engineers have," Healey argued.

Healey, a Langley resident who previously owned two leaky condos in Coquitlam and Port Coquitlam, has sued the CMHC in B.C. Supreme Court and has a trial date set for October.

Though he couldn't comment on the information obtained by The Richmond Review, he said in B.C. Supreme Court earlier this month that the CMHC was well aware in the early 1980s of widespread structural problems related to water damage and subsequent mortgage defaults and was notified that repairs could cost \$10,000 per unit at that time.

The so-called leaky condo disaster has cost B.C. homeowners more than \$1 billion in repair bills to their condominium, townhouse and high-rise complexes which sustained major damage due to rotting wood that had been exposed to excessive amounts of water. Saddled with repair bills commonly in excess of \$30,000 per unit, many owners were forced into bankruptcy. Since the scope of the calamity was revealed in 1997, homeowners, as well as architects, engineers and builders, have been looking for someone to blame. That someone has remained elusive until now.

In a memorandum to management dated Aug. 4, 1981, the director of the CMHC's technical research division and the vice president of its insurance operations, among others, signed a five-page document that warned of the possible national repercussions from problems related to wood-frame construction first discovered on Canada's East Coast.

Problems with Newfoundland housing began cropping up in 1976.

Hundreds of homeowners complained to the CMHC about moisture-related troubles,

which researchers expected "exist elsewhere in similar proportions but have hither to gone undetected."

"This condition demands early action by builders and homeowners, otherwise, early deterioration by rot of wood frame houses in Newfoundland, and most likely other parts of Canada, will reach major proportions."

The memo went on to say that the issue didn't appear to be isolated to mortgage-insured and subsidized housing.

"Being aware of the problem, CMHC could be delinquent in not bringing appropriate aspects of it to the attention of others."

Government departments, such as Energy, Mines and Natural Resources "could unwittingly exacerbate the problems" and unless that department is informed by a thorough knowledge of moisture-related problems, programs such as the Canadian Home Insulation Program could lead to "the promotion of structural deterioration," the memo said.

The memo was written following the completion of a July 1981 paper authored by Peter A. Rowles, an engineer. The name of CMHC project manager James Herbert White is on the title page.

White was the government whistleblower who revealed to The Richmond Review in the fall of 1997 that scientists warned a decade earlier of the sort of problems that had a cataclysmic impact on tens of thousands of multi-family homes in B.C. He was the first to quantify the West Coast problem as approaching a billion dollars, a figure government officials disputed but which has now been exceeded.

White said he received two letters of reprimand from his superiors for speaking out, and was ultimately "forced into early retirement" in 1998 because on a third letter he would have lost his pension.

The paper highlighted where the problems were occurring and what steps the government needed to consider.

"Newly constructed, electrically heated houses on the east and west coast...and well sealed houses in less extreme climates have experienced severe moisture accumulation within the outer structure," the report stated.

In coming to an "adequate solution," the report said several questions needed to be considered.

"They are listed here to serve as flags to those responsible for their consideration. What are the political implications? What are the social aspects? What will be the economic impact? What are the legal implications?"

The author's warnings would prove prophetic.

Developments half a world away would prove to have unforeseen consequences for Canadian housing as the simmering Arab-Israeli conflict of the early 1970s spawned a global energy crisis.

Arab member states of the Organization of Petroleum Exporting Countries had threatened to cut off the supply of petroleum to countries supporting Israel in its fight with Egypt. That list included the United States and its Western Allies.

With the price of oil threatening to quadruple, Canada responded by introducing energy-saving measures such as altering the way homes were being built, making them better insulated and with fewer air leaks, in an effort to reduce heating costs. But experts now agree this manner of design produced less forgiving walls virtually incapable of drying after repeated and prolonged exposure to water.

In 1982, Newfoundland's minister of development, H. Neil Windsor, wrote a letter to the minister responsible for the CMHC, urging both levels of government accept responsibility for the widespread housing failure.

"While responsibility for this serious problem lies to an extent with the homeowner, we must not lose sight of the fact that both federal and provincial governments have, for some time, been publicly encouraging homeowners to conserve energy through

increased insulation and airtightness of their homes," Windsor wrote to Paul Cosgrove, a member of then-prime minister Pierre Trudeau's cabinet.

"In light of this, the onus rests with both governments to take immediate action and to this end I would suggest, without any delay, we launch a publicity campaign to advise homeowners of the moisture problem and ways to eliminate it."

Windsor carbon-copied his letter to Canada's then-justice minister, Gerald Ottenheimer, and minister of municipal affairs, Hazel Newhook.

Cosgrove, however, did not support Windsor's assessment, detailing his reasoning in a letter marked "restricted" that's part of a management review committee record of decision.

"...Public enunciation of such views could raise expectations of material assistance which in itself could vastly exaggerate the problem, and could also be construed as an admission of liability in response for recompense for which there is no evidence or justification."

Cosgrove added that he recognizes that "on becoming aware of moisture induced problems in housing there is a responsibility to determine the nature and extent of these problems, which we are doing."

Stuart Howard, president of the Architectural Institute of B.C., said he first entered his profession in 1976 and he certainly doesn't recall a "publicity campaign" alerting building professionals about the types of problems cited by CMHC's researchers.

"There was no widespread documentation of that."

Before the energy-related changes to home design, "if moisture got in, (walls) had the ability to dry to the inside and outside," Howard said.

"Once we started sealing them up, it had no place to dry up."

It wasn't until the mid-1990s that architects were warned about wall design and they began to make the appropriate changes, he said.

"I don't know why the CMHC was keeping it to themselves. It sounds like (CMHC's researchers) knew what they were talking about," he said.

"I'm not sure what the CMHC did with that information. It upsets me that that information wasn't disseminated widely. We're now having to deal with the problems. We could have avoided it with more information..."

"Sometimes it's easier to keep quiet about it."

Howard said Ottawa was too preoccupied in mid-'70s with energy saving, which "so overwhelmingly motivated every decision. Their mandate was, 'We've got to save money, oil and gas.'"

But Jim White, who since being ousted from the CMHC's research division has been living on a meagre retirement income in his home in Kemptonville, Ont., send there's plenty of blame to be passed around.

Giving further insight to the behind-the-scenes decision making that flowed from the 1980s research, White said politicians were buckling under heavy pressure from the housing industry to keep construction costs down and avoid enacting new costly regulations. These politicians made it clear to CMHC brass what they didn't want to hear, he said.

The bottom line was that the housing industry wanted less regulation and bureaucracy, not more.

"So what happened was that industry was allowed to dictate what government documents said. If in fact the politically-connected bad builders...are allowed to build to a low standard, then even the good builders, to keep their prices in line, have to start building to lower standards..."

"If government didn't support lousy industry, poor quality, then in fact everybody would be richer. That's the background to this whole thing and ultimately the reason I left the government."

"We knew how to build right."

Industry pressure also resulted in the CMHC moving away from the building inspection business, White said. That responsibility was left to municipal inspectors. But cities couldn't afford to pay for the extensive training that was necessary to completely understand the issue and spot the problems, White said.

"Nobody tells the truth, except silly (people) like me who try and nobody wants to hear the truth. The truth is that everybody screwed up a little bit."

There was no magic behind older houses, which too had numerous flaws, and definitely let rain water into their walls. But those faults were masked because these houses were heat sieves, with much warmer walls that dried out quickly.

When increased insulation and other energy-saving approaches were introduced to minimize heat loss, the walls became much cooler, didn't dry out as readily and thus became less forgiving. The wood remained wet for prolonged periods, conditions in which rot could and ultimately did thrive, White said.

Going public about these new revelations in the 1980s would have been "tremendously difficult politically because the industry was already very powerfully campaigning" for the CMHC to let the housing industry do its own thing, insisting it "knew what it was doing."

"We couldn't tell people that certain construction techniques would run into trouble because the industry said 'you can't say that about us, you haven't proven it beyond a shadow of a doubt,'" White said.

As early as 1982, White, who at one point headed the research division, warned the federal government's Energy, Mines and Natural Resources Department and the CMHC "that if we reduce the heat loss through walls without reducing the moisture load in walls, we will have a massive problem. And the response of EMR at the time was to try to have me fired for not being supportive of the energy-conservation program." Pressure to build cheaply, rather than correctly, won out, White said. And the consequences have proven to be costly.

Although the total amount of loans handed out by B.C.'s Homeowner Protection Office is just over \$315 million (through March 31, 2005), the vast majority of affected homeowners did not qualify for the interest-free loans program, established by the province in response to the leaky condo crisis.

Adding insulation to walls may have made them more susceptible to rotting, but that's not the primary cause of B.C.'s leaky condo disaster, according to Mark Lawton, an engineer with Morrison Hershfield.

He said there's no question that water-related problems were experienced in housing on Canada's east coast in the early 1980s, but research at that time suggested that condensation was the problem. Looking back at some of the original photographs from the east coast problem, however, Lawton suspects the culprit was actually rainwater.

He said it's a bit of a red herring to draw a connection between these newly discovered CMHC documents and the housing disaster that befell the west coast.

Lawton does concede that Ottawa could have done a better job in alerting the residential construction community.

"That's true, they didn't do as much as they could have. But did they do as much as they should have?" Lawton asked rhetorically. He said the Newfoundland problems triggered an avalanche of research in this area, which ultimately indicated the prevalence of the problem in other parts of Canada was low.

There were a whole bunch of factors that came together to create B.C.'s leaky condo problem, Lawton said.

From architects creating more California-style housing replete with exposed balconies, expansive windows, flat roofs and seldomly-seen overhangs, to the construction boom that saw the same essential design replicated over and over, these also factored in.

If anything, the CMHC may have spent too little time researching the issue of rain penetrating into these homes, and too much time analyzing whether humid air

created by people, plants and cooking practices was the source of the problem. Lawton also agreed that since the homes of the 1960s and 1970s were energy inefficient, a lot of the heat radiated through the walls, helping them to dry out in the event they became wet.

For builders and architects to now point the blame at Ottawa in light of all the litigation is "convenient", he said.

In a 1983 engineer's report funded by the CMHC, the consultant recommended that the national building code be written to reflect the unique climatic conditions for each region of the country.

Lawton said that regional-specific code never happened, and it could be argued such a change should have been made.

The 1983 report, written by Toronto-based Marshall Macklin Monaghan Limited, also found flaws with the way CMHC research was being disseminated, suggesting that legislating attendance at practical demonstrations in order to maintain trade registration may be necessary, and that the licencing of certain trades should seriously be considered.

"The existing method used to transfer technology have not proved successful. Architects and engineers have not kept up with modern developments, a situation even more prevalent with various trades. New methods and media for transferring knowledge must be developed."

If research showed building science was contributing to the failure of homes, design professionals should have been warned, argued Bob Switzer, senior vice-president of quality and customer service for Polygon Homes.

Switzer, the former director of permits and licences for the City of Richmond, was surprised to learn that researchers were sounding the alarm bells so long ago.

"As a building official, if I had received documentation like this, I would have pushed for change (to the building code). It certainly would have made a difference."

Switzer said residential development companies didn't set out to build leaky condos. But that's what happened, and his firm has taken a proactive approach to ensuring there isn't a repeat by incorporating the latest research and technologies.

"We've quietly tried to turn the industry around."

For example, at Polygon, the poly is now literally gone.

The clear sheets of plastic, known as polyethylene, found in the walls of most homes is no longer used by the Vancouver-based residential development firm because it isn't necessary, Switzer said.

Without that plastic, walls are better capable of drying in the event they become damp, he pointed.

Beforehand, whenever water in the form of condensation or wind-driven rain entered the exterior wall cavity, the plastic inhibited the natural drying process, he explained.

"Any water that gets in has one hell of a time getting out."

Today, Polygon's buildings all incorporate rain screens, a vertical drainage cavity behind a building's exterior shell that redirects any water that may seep through the exterior.

Also, numerous holes have been drilled at the top and bottom of each panel of plywood on the shell of Polygon's homes, providing yet another opportunity for the walls to dry.

Delta-Richmond East MP John Cummins, whose office sent in the freedom-of-information application to the CMHC at The Richmond Review's request, said these new documents justify the need for a federal investigation.

"I think that an inquiry is certainly warranted here."

After acknowledging a problem existed, instead of protecting the public, the CMHC did nothing, and Cummins said he wants to know the rationale behind the decision-making.

He will be seeking answers from London-North Centre MP Joe Fontana, the minister of housing who is responsible for the CMHC.

"I think there's obviously a case that can be made that the CMHC didn't act in a reasonable and responsible manner...and contributed to the crisis. If they had issued a warning, a lot of people would have been spared grief."

Cummins will specifically be asking the minister what actions he will be taking "to address the failure of the corporation to warn homeowners and potential homeowners of this looming problem."

Speaking through his director of communications, Fontana, who is the federal labour and housing minister, declined to comment on this issue because the case is currently before the courts in B.C.

B.C.'s minister responsible for housing, Murray Coell, also wouldn't comment, according to his communications staff.

Vancouver's James Balderson, owner of a leaky townhouse that needed \$161,000 to repair, said he will be demanding a national inquiry, complete with a judge empowered to subpoena documents and people, to "shine a true light on the problem."

While he's always had suspicions about the government's knowledge about the issue, he's never been able to nail that down.

"I think a new federal commission of inquiry would be very useful in ferreting out more information like you have discovered," he said.

"To this day politicians have managed to skirt around the problem and around their responsibility to the public. The discovery of these documents make it very clear that at the highest level the politicians and the federal government were put on notice in the early-1980s about this problem. I would say it's the failure of the politicians to act that allowed this rot to go on for so long..."

"In my opinion it's a clear dereliction of their duty to protect the public."