
Condo Smarts

Headline: Air Conditioning: Health Implications

Topic: Air Conditioning Units

Publication / Date: Province, June 16, 2022

Written by: Tony Gioventu

Dear Tony: Our strata corporation has a bylaw that prohibits the installation of any window mounted or wall mounted air conditioners. Our building was constructed in the mid 80's, and was a leaky condo repair in 2002. As part of the repairs, we were advised at the time to adopt a bylaw that prevented any type of penetrations or openings on our building envelope. Because most of our owners lived through the repair cycles, they are now extremely paranoid about any types of wall mounted cooling units, but our council is also aware of the dangers of extreme heat, especially with so many seniors. Does the coroner's report on the deaths during the heat dome impose any obligation on our strata to change our bylaws?

Adriana D.

Dear Adriana: The coroner's report has brought to light the seriousness of extreme heat events, and the necessity for cooling and public safety. It's time everyone evaluated their air conditioning bylaws. Very few multi family buildings in the Fraser Valley and Vancouver Island have collective or individual cooling systems. Our climate was historically moderate and natural cooling was the easiest economic choice for developers and homeowners. Climate events, such as the heat dome, or a polar vortex have forced us to change our building designs and mechanical systems.

Everyone assumes heat during the winter is essential for survival. We need to acknowledge that cooling through extreme heat periods is also essential. Every building system has unique designs, property uses and property allocations such as common property and strata lots. Depending on the type of buildings, such as apartment, highrise, town house or bare land strata corporations, there may be a variety of options. Bare land and townhouse properties will have the easiest modifications as heat pumps/cooling may be retrofit to

furnace systems or mounted at ground level adjacent to the units. Low rise apartment style or stacked townhouses may require a wall penetration to permit the installation of a heat pump or cooling system. Midrise and highrise buildings may permit balcony mounted heat pumps and will be complicated, especially if the exterior walls are only glass. Each building will require an evaluation of the type of cooling systems available, how they will be installed, location of installation, whether a property permits such alterations, and the impact on the use or appearance of common property.

I agree, a property owner should exercise caution when approving any alteration that results in any type of holes to the building envelope, but it is possible to have the installations detailed to ensure safe performance. I would recommend your strata consult with a building envelope engineer to look at your property and recommend locations and methods of installation. If an owner requests permission to install a heat pump, the process will be clear. Property owners should also look at the conversion of their roof top make up air systems to heat pumps. Most property owners only have units that generate heat during the winter, so in the summer when it is 40c, the system is pumping from the rooftop 40+c heat into the building when it should be cool. A roof top heat pump, is electrical, reduces GHG's, and most important will reduce the ambient temperature of the building common areas during extreme heat events.

Set up a common area with cooling as a refuge, and schedule wellness checks within your community. Most buildings have some sort of landscaping. Keep your trees healthy and maintained, they significantly reduce street and building exposure and temperatures.