



## PROJECT PROFILE

# 633 Northcliffe Boulevard

In 2022, the City of Toronto put out a challenge to building owners across the city. 633 Northcliffe took up the call.

## The Project

The climate is changing. In Toronto, buildings are the largest source of greenhouse gas emissions today. To support the City's Net Zero Strategy, the Deep Retrofit Challenge (DRC) was created to support and showcase replicable, cost-effective deep energy retrofits.

One successful program participant sits at 633 Northcliffe Boulevard, near Toronto's Oakwood Village. Constructed in 1968, this 86-unit apartment building still had most of its original systems in place, and they were both inefficient and carbon-intensive — making it an ideal candidate for the DRC.

We spoke with Martin Walter, Director of Capital Improvements at Lankin Investments, on the role that deep energy retrofits and programs like the DRC can play in supporting the City of Toronto's net zero targets.

"The importance of a deep energy retrofit is to reduce the overall greenhouse gas emissions of the property, which will in turn help mitigate climate change and improve local air quality. But it also has financial benefits by reducing the operating cost of the property. In the long term, the building owner will save money."

A deep retrofit gave Lankin the opportunity to improve multiple aspects of the building at once, rather than taking a piecemeal approach — significantly lowering both energy consumption and GHG emissions, while improving tenant comfort.

## Project Goals:



Reduce energy use intensity (EUI)



Reduce air pollution gas (GHG emissions)



Improve tenant comfort and control



Reduce utility costs



Increase property value

**Building owner:**  
Lankin Investments

**Energy consultant:**  
EVNA Engineering

**Building type:**  
Multi-unit residential

**Number of storeys:**  
11

**Number of units:**  
86

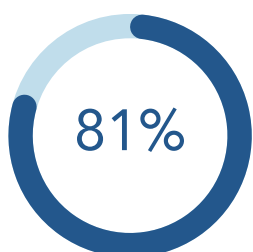
**Gross floor area (m<sup>2</sup>):**  
6,973

**Year built:**  
1968

## Energy Use Reduction\*



## GHG Emissions Reduction\*



\* Projected values

## The Process

A chance conversation with EVNA Engineering ignited Lankin's interest in the DRC. They quickly realized the program would be a great fit for 633 Northcliffe, which energy modeling indicated had the potential to see at least a 50% reduction in energy use and a 75% reduction in greenhouse gas emissions.

An integrated design workshop offered as part of the DRC helped Lankin confirm the retrofit measures needed to achieve the desired reductions, while also meeting a primary objective: adding air-conditioning to the suites. For Lankin, installing **cold-climate heat pumps** in each suite, to replace inefficient hot water radiators, was the most significant upgrade. This was key to not only improving tenant comfort, but also increasing their competitive edge in the rental market, Martin says.



Other upgrades included sealing around windows and doors to reduce uncontrolled air leakage, replacing the old gas-fired domestic boiler with a high-efficiency condensing model, and installing low-flow water fixtures to reduce hot water consumption. In total, these upgrades are projected to reduce the building's equivalent CO<sub>2</sub> emissions from 266 tonnes per year to just 52 — equivalent to removing nearly 50 gas-powered passenger vehicles from the road.

As they cross the finish line at 633 Northcliffe, Martin's team credits creating a realistic budget at the outset and hiring the right people to complete the work as essential to smooth implementation.

"The most important part of finding the right team is ensuring that they have experience with deep energy retrofits in your building type. Whether it's multi-residential or industrial or commercial, each building type carries a different set of issues and challenges, and your team needs to be aware of what those are."

## Measures Implemented:

- Decentralized air-source heat pumps for space conditioning in each suite
- Smart thermostats for in-suite temperature control
- Electric baseboard and unit heaters for common area heating
- Air sealing to reduce uncontrolled air leakage
- Low-flow showerheads and faucets
- High-efficiency natural gas boiler for domestic hot water
- Electrical service upgrade



**Project Budget\***  
**\$2,659,120**



**Estimated Payback\***  
**21 years**

\* Projected values

## Lessons Learned

The retrofit of 633 Northcliffe went very smoothly, thanks in large part to Lankin's prior experience with building retrofits in its portfolio. One major challenge, however, was navigating the process of upgrading the electrical service to the building. This took longer and proved more costly than expected. Martin advises other building owners to engage Toronto Hydro early in the process and allow plenty of time in their project plan for this work to be completed.

For Lankin, the DRC program was an essential motivator for taking on a project of this magnitude. "Without the incentive, I don't think we would've gone all the way into a deep energy retrofit," Martin admitted. The value in these projects is now clear to Lankin Investments, and their team will continue to roll out retrofits across their wider portfolio. "But the reality is," Martin says, "They are largely driven by the incentive programs offered by federal and municipal governments."

At the end of the day, the most rewarding part of the retrofit for Martin has been delivering better quality housing for the rental market. "We really do care about the quality of life that we provide to our tenant base. And providing them a modern heating and cooling system — we think that's the best part of the project."



"To create a sustainable environment for the people of Toronto, we have to adapt and utilize technology to better operate our buildings."

**Martin Walter**  
Director of Capital Improvements,  
Lankin Investments



Learn more about the participating buildings' proposed emissions reductions and deep retrofit measures [here](#)



For more information on the Deep Retrofit Challenge, please contact [drc@toronto.ca](mailto:drc@toronto.ca)