

The Ridge: Cape Town's latest green-rated building

Incorporating advanced sustainable building technology and blue-sky thinking, The Ridge joins the V&A Waterfront's portfolio of sustainable developments with Green Star accreditation.



Image: Sarah da Pina

Other buildings in the precinct with green credentials include the Allan Gray building at No.1 Silo, the Watershed and No.5 Silo, the Zeitz Mocaa, the Silo Hotel, as well as No.6 Silo incorporating the Radisson Red (the first five Green Star hotel).

"The Ridge and our other developments provide a working example as to how it can be done for companies that are looking to the future of their businesses in a sustainable way with a focus on both environmental performance and the greatest asset a company has: its people," says David Green, the CEO of the V&A Waterfront.

Features

Air quality: The building operates on mixed mode interior climate control system, which includes the following features:

- Natural ventilation, which significantly raises the indoor air quality and is controlled by the occupants. This means that office workers may open the windows to let in fresh air for up to 80% of the year.
- An atrium runs from ground to the third level of the building. Referred to as the 'central street', it helps to pull air through the building, in through the windows and out through the rooflights.

Minimal HVAC (air conditioning) usage: The building incorporates passive (non-energy consuming) temperature control mechanisms several of which are unique. The zigzag shaped engineered timber façade ingeniously orientates the glass windows towards the north or south, which prevents lower angle sun from the east or west from entering the office spaces. This provides natural daylight while reducing glare and patches of hot sunlight.

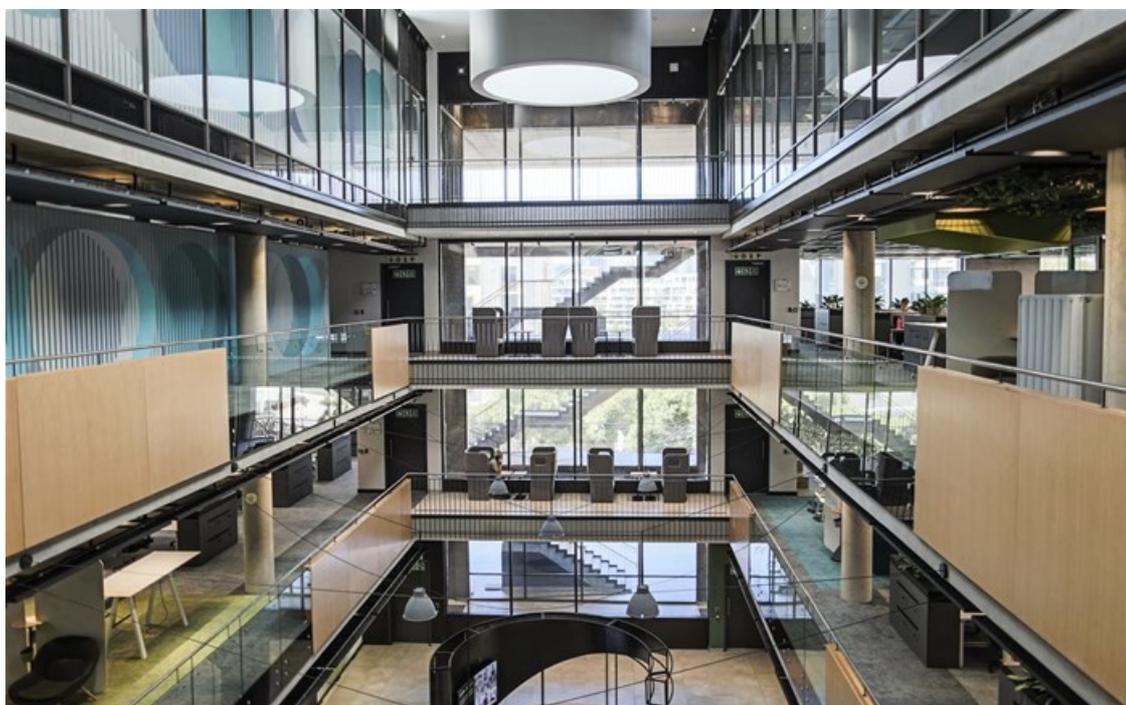
Thermally activated building system technology (Tabs): This technology is installed into the soffits (ceilings) above the working areas of the building and this cools the concrete structure by means of water circulating from the chiller and heat pumps on the roof. This in turn cools the air below, which circulates around the workspace.

"All these measures mean that people inside the building will experience steady indoor ambient temperatures which respond slowly to outdoor temperature variations. The mixed-mode system design aims for the building's conventional air conditioning system to be active for only 20% of the year. This is in line with international standards such as WELL™, in promoting occupant productivity and thermal comfort," says Mark Noble, the Waterfront's development director and project leader for The Ridge.

The atrium

"People-connectivity is enhanced by the central street (atrium). Apart from the areas where rational fire or acoustic design required the atrium to be enclosed in a few places, it mainly allows the free movement of building occupants on each level. Hence, informal connections can occur among building occupants and their visitors.

"Natural lighting includes the impressive roof lights above the atrium which allow optimal levels of natural light. This adds to conventional lighting on each floor. Low-energy LED lighting is suspended between acoustic panels to provide a stimulating work environment while the panels provide appropriate levels of sound absorption for work," says Kirsten Goosen, development manager for V&A Waterfront,.



The atrium. Image: Gareth Griffiths