

A DEVELOPER'S PERSPECTIVE

CHALLENGES IN IMPLEMENTING SKYRISE GREENERY

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With the blitz of ideas, products and projects surrounding green roofs and green walls, hyping their aesthetic and environmental benefits, CITYGREEN seeks the undisguised views of respectable skyrise greenery developer, City Developments Limited (CDL), on the feasibility and acclaimed benefits of skyrise greenery within residential and commercial developments.

Singapore's property pioneer and Enterprise Green Adopter, CDL, has been incorporating skyrise greening features into its BCA Green Mark developments, including Cube 8 and Tree House. Mr Allen Ang, Assistant General Manager of Projects division, shares insights on CDL's investments and on integrating nature into its developments.

CG: CITYGREEN

CDL: City Developments Limited

CG: Singapore is well-known as a Garden City. Besides providing parks and roadside trees, policy makers have recently been promoting skyrise greenery. In your opinion, do you think integrating greenery into our buildings, in the form of roof gardens or green walls, will make them more aesthetically pleasing?

CDL: The integration of greenery into buildings can enhance the aesthetic appeal of a building. Beyond a distinctive architectural structure created through extensive facade greening, the introduction of pockets of biodiversity elements within buildings also allows for connections between its occupants and nature. More impor-

ABOVE Tree House.



tantly, these function as “green lungs” to provide a healthy living space.

For our residential development, Tree House, located at Upper Bukit Timah, near the Bukit Timah Nature Reserve, we drew inspiration from the verdant landscape that embraces the site and wanted to create a distinctive architectural facade that complements the site’s lush surroundings. The overarching nature theme is reflected in the expansive vertical green walls that adorn one of the four apartment blocks.

The green wall, a natural insulation, serves as a vertical green lung and reduces the estate’s carbon footprint by filtering pollutants and carbon dioxide out of the air. The sloped design

also creates a “bio-shelter”, aiding rainwater collection for landscape irrigation elsewhere in the development.

CG: How many percent of your new projects have some components of skyrise greenery? Do project costs increase as a result of these installations? If yes, by how many percent? Have they brought about any advantages, in terms of attracting business?

CDL: For all our new projects, we encourage our architects and landscape consultants to introduce some components of skyrise greenery, be it sky gardens, green roofs or facade greening. In general, these features have an incremental cost on our overall development budget. However, these green features have a positive contribution to the overall aesthetic features of the development, which serves as a selling point. On the environmental aspects, these green features help mitigate Urban Heat Island effects, promote biodiversity and improve air quality. We have not specifically done any studies for the components on skyrise greenery.

CG: What are the main reasons that stop your organisation from developing more projects with skyrise greenery? Please elaborate.

CDL: The integration of greenery into buildings complements CDL’s commitment towards environmental sustainability. However, the feasibility of implementing skyrise greenery varies from site to site. Amongst the factors determining the suitability of each site for the implementation of skyrise greenery includes the orientation of the site, sunlight pathway, etc. In addition to these environmental factors, the project’s design concept is also a determining factor. Each of our residential and commercial developments is unique in its concept and architectural design, and the integration of skyrise greening, where appropriate, has to complement the overall design concept.

CG: There are studies advocating the thermal benefits of green roofs and green walls, i.e. saying that they will result in electricity bills reduction due to their cooling effects. From your experience, is this claim true for your projects?

CDL: Studies have shown that green roofs are able to reduce room temperature by up to two degrees. Having green walls on the exter-

nal facade wall would be able to reduce the solar heat gained through the walls. This would mean the air-conditioning system needs not run at a cooler temperature and it helps in reducing electricity bills. As our developments are designed and built with environmental sustainability in mind, we constantly ensure that our building blocks are oriented towards north-south to enjoy the natural cross ventilation.

CG: Currently, there are a number of government incentives in place to promote skyrise greenery. Are you enjoying any of these incentives? Are there any specific areas in the existing incentive scheme that need clarification or improvement? In your opinion, what other incentives will be more effective?

CDL: We understand that the existing green roof incentives only apply to existing buildings in the Orchard and Downtown Core Planning areas, but not in other areas. In our opinion, the incentives should be extended to all parts of Singapore, especially if the developer makes a concerted effort to bring nature closer to the users and this helps to mitigate Urban Heat Island effects for a greener and environmentally sustainable Singapore.

CG: Currently, are there any information gaps that need to be addressed?

CDL: The Green Roof Incentive Scheme is not widely publicised and is limited to existing buildings in certain downtown planning areas. This incentive should be extended to cover new buildings too.

Our Green Adopter, CDL, is committed to remaining steadfast in developing and managing greener properties. In testament to the importance it places on the environment, the company currently invests between 2% and 5% of the construction cost of a development on green design and features. The challenges it faces in incorporating skyrise greening cannot be disregarded, albeit its dedication to green projects. More research and efforts are needed to upgrade the industry’s expertise and capabilities and convert more stakeholders to become adopters of skyrise greenery, as a sustainable solution for our built environment. We could all visualise our city with plenteous greenery-infused buildings.