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New OxGlen buildings target Green Star design rating

The two newest buildings in the OxGlen precinct, known as OxGlen Block 3 and Block 4, are targeting a four-star Green Star SA Office v1.1 Design rating from the Green Building Council South Africa (GBCSA). According to senior sustainable building consultant at Solid Green Consulting Annelide Sherratt, the Green Star process was managed as one multiple building certification.



On this project, Clive Jearey, architectural director at LYT Architecture, comments that he particularly enjoyed being able to consider the whole block as an opportunity to create an interconnected series of buildings, with shared landscaping and street furniture that contribute to a compelling urban fabric. Each block is designed as sectional title and offices are arranged around open, landscaped courtyards that allow the buildings to connect to nature.

Jearey adds that work among the professional team has been a highlight on this project. The client, Barrow Properties, and main contractor, Barrow Construction, were an active part of the process from the time the architects started designing. "It's a live project that allows for immediate feedback. This kind of constant collaboration unlocks very practical 'buildability' benefits," says Jearey.

The green premium

The project is targeting innovation points for financial transparency and the quantity surveyors at Barrow Construction estimate that the green premium was as little as 2.44%. Jearey explains that being able to affordably achieve the Green Star rating comes as a result of sound upfront design and incorporating green principles as a matter of good practice.

According to the latest annual MSCI Green Property Index, Green Star certified properties have provided better capital growth and higher incomes over the last three years of analysis. There are also substantially lower vacancy rates in certified buildings, which indicate links to tenant retention. "We understand the importance of the Green Star certification from a commercial perspective," says Barrow Construction MD John Barrow. "Clients are very definitely asking for this kind of independent verification to assess green credentials."

In addition to improved performance in the energy, water and waste sectors, health and wellness and improved productivity benefits are major perks for both employers and employees. These advantages are attained through prioritising improved indoor environmental quality (IEQ) with ample natural light and views, fresh air, and healthier material choices.



Transport, energy and water

Thanks to the Gautrain servitude, which runs below Oxford road, the buildings are set far back from the street. Rather than privatising the space and closing it off to the public, the developer chose to include green spaces and coffee shops to boost opportunities for passive surveillance and enjoyment of the urban environment.

Sherratt explains that the OxGlen precinct is near a number of residential developments and amenities, such as Rosebank Mall, The Zone, Oxford Corner, Rosebank Fire Station, Rosebank Towers, Vantage, The Bolton, The Galleria, The Tyrwhitt, The Median and the Netcare Rosebank Hospital; as well as the Gautrain and bus systems. Cyclist facilities and lockers have been provided for staff and visitors; and electric, hybrid and fuel-efficient vehicles and motorbikes have been given preferential parking bays in the basement.

Sherratt adds that energy modelling was done on Block 3 and Block 4 during the design phase to ensure optimum efficiencies, and the buildings surpass South Africa's mandated energy efficiency standards (SANS 10 400 Part XA), showing a 45% improvement compared with a conventional notional building. Energy efficiency was ensured through heat pumps for water heating, and the use of LED light fittings and occupancy sensors throughout. Balancing the maximum use of natural light and views, while mitigating glare through good green office design, also has health and wellbeing benefits for office workers.

Water-efficient sanitary fittings were specified for all bathrooms to reduce daily consumption of this precious resource. Water-wise landscaping and irrigation systems will reduce the anticipated water consumption by about 50% through using smart technology such as rain and moisture sensors, drip irrigation and smart controllers.



A unique focal point

Found in the courtyard of one of the new buildings is a majestic Pin Oak tree, which is estimated to be over 100 years old and had to be protected. Jearey explains that respect for the tree played a large part in the design of the precinct, and it forms the focal point for sightlines and walkways through and around the buildings. Preservation of the tree also extended underground, where its ancient roots meant that the entire basement had to be designed around it. "This wasn't always easy," adds John Barrow. "The site shares a common super-basement and making the various levels work posed a complicated but interesting challenge to the professional team."

Historic trigonometrical beacon

During phase one of the Oxford-Glenhove precinct development, a historic trigonometrical beacon that had become covered by grass and rubble, was exposed and restored. While it may simply look like an old round concrete pillar to most, it dates back to around 1897 when it was erected to mark the intersection of three of the historic farms of Johannesburg, namely Braamfontein, Klipfontein (now Houghton) and Syferfontein (now Melrose). It now forms a prominent part of the landscaping of the precinct along Oxford road and is even a geocache location.

"OxGlen is a large, iconic development within the Johannesburg cityscape," concludes Sherratt. "A Building Users Guide was developed for Blocks 3 and 4, which aims to contribute to optimal operational efficiency by informing building users on how to use systems effectively, which will in turn improve their own experience within the building. The guide will also inform the way forward in terms of implementing green principles for any refits and expansions. By incorporating green building principles from the outset, OxGlen is helping to emphasise sustainability as the new 'business as usual'."

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