4 Stan Road

GREEN RATINGS ticked

Bringing together green building and urban renewal with quality architectural design, 4 Stan Road, Sandton, demonstrates respect for its context as well as a sustainable future. The development earned both four-star Green Star SA Design and As-Built certifications from the Green Building Council of South Africa (GBCSA).

1. The northern facade is fully glazed, with external views provided for over 80% of the usable floor area. © Mike Pawley for MDS Architecture

2. The west-facing street facade was treated as a solid face with full height fins and thin slivers of glazing. © Mike Pawley for MDS Architecture

CONTEXT

Bordered by three residential towers and a large office development, the original single-storey building, constructed in 1991, somewhat disappeared between the massive developments and could no longer accommodate the growing needs of its occupants.

MDS Architecture designed the office building for a consortium of professionals and today, 4 Stan Road is a slick, sculptural eight-storey corporate building.

FACADE TREATMENT

To manage the typical heat build-up of a west-facing facade and control the associated glare issues, the street facade was treated as a solid face with full height fins and thin slivers of glazing.

The north-facing facade is fully glazed, with external views provided for over 80% of the usable floor area. Shading screens along this facade, together with the glazing type and ratio, ensure adequate levels of thermal comfort.

LIGHTING AND COOLING

Energy-efficient lighting is used throughout the building and two air-cooled chillers are used with two variable air volume (VAV) air-handling units per floor. In terms of indoor environmental quality (IEQ), fresh air is provided at over 12,5l/s/person, which exceeds the SANS standard of 7,5l/s/person. continues on p16

1. A breakaway space for informal meetings, brainstorming or relaxation. © Mike Pawley for MDS Architecture

2. Two air-cooled chillers per floor provide efficient cooling of the building, while fresh air is provided at over 12,5l/s/person, which exceeds the SANS standard. © Mike Pawley for MDS Architecture

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WATER AND SANITATION

Water-efficient sanitary fittings limit wash hand basin flow rate to 5l/min, and urinals to 0,9l/flush. Toilets have dual flush mechanisms, and shower heads have a 9l/min flow rate. Minimal landscaping further decreases the demand for potable water used for irrigation.

Sub-metering of both water and energy is connected to an automated system which will enable the collecting, monitoring and recording of data, as well as alert to irregular trends in consumption. Building tuning post-occupancy is also a contractual requirement between the building owner and the various consultants and contractors.

HEALTHY MATERIALS

All paints, adhesives, sealants and carpets have volatile organic compound (VOC) limits that fall within the Green Star allowance. Carbon emissions have also been reduced by using steel with a recycled content of more than 60%, a reduction in the absolute quantity of Portland cement by over 30%, and by reducing the use of PVC by more than 30%.

WASTE MANAGEMENT

An adequately sized waste recycling area is provided that is safe and easily accessible. Tenants are encouraged to separate waste and recycling material into separate bins, and a service provider collects the recycling material for separation off site.

PARKING PODIUM

Parking is provided in excess of the minimum statutory requirement for offices, and is accommodated above ground in a podium structure that is naturally ventilated and illuminated.

The top of the parking podium forms a landscaped breakaway sky deck for the building's users, with large-scale indigenous trees. The podium itself is clad with recycled security grilles from the original building, which have been fitted with planters in order to eventually create a green wall.

ALTERNATIVE TRANSPORT

The building is located close to Gautrain bus routes and cyclist facilities, including 23 secure bicycle storage spaces, showers, change rooms and lockers that are provided to allow building users to cycle or even run to work.

AN ADDED ACCOLADE

Green building consultants, Solid Green, undertook the Green Star certification process, which won the project the Best Quality Submission category at the Green Star SA Leadership Awards.

Full thanks and acknowledgement are given to Solid Green Consulting and MDS Architecture for the information given to write this article.

A GREEN MASTERPIECE

Citadel's new head office in Cape Town combines modern design and traditional materials, all while being environmentally conscious.

The Castle is no longer Cape Town's only fortress. Located in Claremont, The Citadel, a 30m high, six-storey, 12 000m² building – the hew head office of wealth management business, Citadel – was completed in October 2016. The Citadel's two street facades are clad entirely in pale Namibian granite, which gives the building its ultramodern form and stature.

"For millennia, great societies have erected stone citadels – from Jerusalem to Beijing and from Rome to Babylon," says Robert Silke, architect and principal at Robert Silke & Partners. "And when citadels are commissioned, they are, more often than not, erected from solid stone.

"For this citadel, we have chosen the most durable stone: Granite. Based on the 'style-modern' architecture of mid-20th century cities such as New York – and being the first stone panel building in Claremont – it is intended to be distinct," he adds.

KEEPING COSTS LOW

Developed by Citadel Investment Services in a joint venture with national property development and asset management group, Atterbury, and landowners, Catalyst, the building was constructed on a very tight budget and with controlled expenses.

All 12 000m² of The Citadel were constructed for a modest R130m, equating to a construction cost of just over R10 000/m² – at a time when developers are struggling to build for between R15 000 and R20 000/m².

4 STARS FOR GREEN

To contribute towards climate and city resilience, green building elements such as energy reduction and efficiency, as well as the use of natural materials, were included in the building design while sustainable practices were used during the construction phase. For example, demolition and construction waste was diverted from landfill and where possible, recycled steel has been used.

The Citadel further targets the efficient use of water and limits the impact of the building's emissions, such as light pollution and ozone depletion. Ongoing assessment from the design, through the construction phase until completion, has seen The Citadel being awarded a four-star Green Star rating.

INTERIOR DESIGN

From an interior environmental quality perspective, comfort factors such as external views and glare control are taken into account.

Picking up from the stone facade, marbles and warm metals on the public ground floor give way to an oak-treaded helical staircase up to a softer, warmer environment upstairs.

With predominantly wooden flooring, the first floor offers panoramic views of Table Mountain over the tree canopies. The area is intended to evoke a tree-house or club-house feeling, with a sense of belonging. A break-out area downstairs leads to a private entertainment courtyard and a 140-seat raked auditorium.

The interiors are, like the facade, distinctively modern in form but traditional in material and substance. Leathers, marbles and coppers are used, whilst seating is svelte and sophisticated.

Full thanks and acknowledgement are given to Citadel Investment Services for the information given to write this article.