

NEWTOWN
JUNCTION

FORGING A NEW FUTURE

A massive new mixed-use development in the heart of Newtown is connecting Johannesburg's past, present and future, and reviving the viability of a tired inner city area.

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Already the 85 000m² Newtown Junction has shown how a rich heritage can be interwoven with the progress needed to drive a modern city. The new development is expected to bring an additional 5000 to 6000 people into the inner city each day.

At a cost of R1.3 billion, Newtown Junction was almost a decade in the making, though the concept only started taking shape six years ago. Construction began in 2012 and finished early this year. It includes a 38 000m² shopping centre, 39 000m² of office space, a gym and basement parking for over 2500 cars. Additional features include a landscaped public piazza, open events space and new pedestrian routes. Construction on another key component of the development – a 148-room City Lodge hotel spanning 8000m² will be complete at the end of 2015.

Situated in the middle of Newtown's cultural district, it is the biggest multi-use development built in Johannesburg's central business district since the Carlton Centre was built in the 1970s. JSE-listed property owner Attaq and Atterbury Property

Developments each own half of the development, while some have viewed such a substantial investment in an underperforming area as a brave decision.

The development was financed through Nedbank Property Finance. Charl de Kock, Nedbank's head of property services, says the bank's decision to invest in Newtown Junction stems from its firm belief that Johannesburg's inner city has, and continues to play, a vital role in the greater South African economy.

Morné Wilken, CEO of Attaq, believes Newtown Junction is one of the most exciting developments in the Johannesburg CBD. Part of the attraction in investing in the city centre is also to benefit from the Urban Development Zone (UDZ) tax incentive, which encourages inner city renewal across South

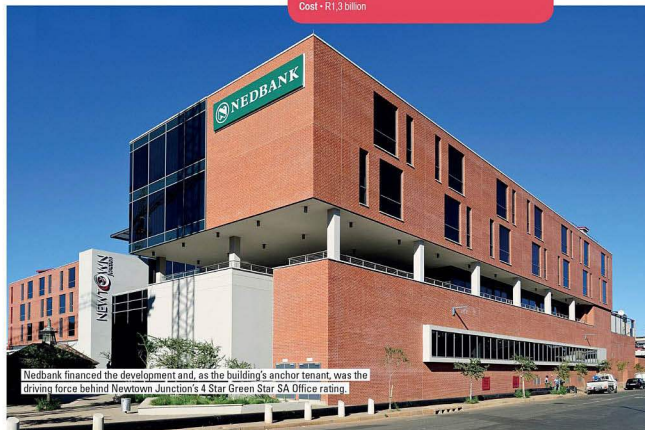
NUTSHELL

Location - Newtown between Museum Africa, Mary Fitzgerald Square and Carr Street
Gross floor area - 85 000m², of which Nedbank occupies 30 000m²

Number of floors - Two retail levels, three office levels, two basement parking levels, one level basement service rooms, including plant and recycling facility

Parking bays - 2546

Cost - R1.3 billion



Nedbank financed the development and, as the building's anchor tenant, was the driving force behind Newtown Junction's 4 Star Green Star SA Office rating.



Africa. Under the UDZ, investors are encouraged to refurbish existing buildings or to build new assets in the inner city and to offset the cost of the development against the company's taxable income.

Atterbury Property Developments MD James Ehlers says the project was originally meant to be just a shopping-centre development, but it evolved into a mixed-use development in partnership with the city and the South African Heritage Resources Agency (SAHRA). While the retail portion of the development has not received a green rating, it has still benefitted from the building's overall green design. John de Klerk, associate director of dhk's Johannesburg office – the lead architects on the project – notes the designs had to take cognisance of heritage structures. The architect's response was to respect the surrounding material palette, which included traditional face brick and red roofs.

"Newtown Junction's design successfully retains the magic of the past, blending it with the excitement of the future. It will become an important landmark in the city centre," says Stoffel Mentz, Aurecon project director and structural engineer.

GREEN BUILDING PRINCIPLES FIRST

While embracing heritage, the development also showcases important sustainability features, particularly in the office component. Nedbank, as anchor tenant in the office building and development overall, was the driving force behind Newtown Junction's green credentials.

The developers knew securing Nedbank, with its 3800 staff, as a tenant would give the project an economic injection. De Klerk says one of the conditions of the lease signed with Nedbank was that the offices achieve a minimum 4-Star Green Star SA rating.

The Newtown campus is the bank's fifth green building. The 4-Star Green Star SA Office Design rating has already been achieved and submissions made for the final As Built rating.

WSP Green by Design advised on how to achieve an office building committed to sustainability and responsible development. The office space uses 30% less energy than a building built to SANS 204 regulations by using efficient heating and cooling systems. One of the standout green features is



The landscaped public plaza retains historic elements such as the market's old red potato sheds and blends these with the excitement of the present and future.



the ice storage air conditioner system – enabling a reduction in peak energy demand.

Two 76m³ tanks located in the basement level are filled with Cristopia balls and glycol infused chilled water that make up the ice storage system. At the start of the day, the tanks are filled with balls of solid ice that are frozen overnight during off-peak electricity times. The ice slowly melts during the day to reduce the cooling required from the chillers.

Design elements improve natural lighting. Large atriums with glass ceilings are a feature of the Nedbank campus. De Klerk explains, "We wanted to make sure office workers are exposed to as much daylight as possible. Not only is it healthier for office workers, but it improves productivity as well," he says. Glare is controlled via external screening and internal blinds.

Good practice also dictates consumption of no more than 200kWh/m² per year for Johannesburg offices. At present, Newtown Junction's simulations suggest it will come in at 55% of this value, at around 110kW.

About 90% of the steel used to construct

Newtown Junction, including some of the rebar, is recycled. The building's roof has also been designed with the right slope and orientation for the future installation of photovoltaic solar panels. Nedbank is in the process of procuring the solar panels.

Fresh air ventilation exceeds the SANS minimum by 40%. High-frequency, low-flicker lighting is used, predominantly fluorescents, but with some LED lighting in the meeting rooms. These are controlled via lux and motion sensors. Only low VOC paints were used.

The office space has a recycling waste storage area. A dual pipe system has been installed for the grey water flushing system and low flow taps and fixtures, and minimum flush toilets were installed throughout the building, including in the retail section.

The development is also in line with the Johannesburg Development Agency's vision to create a greener city that uses fewer resources.

Newtown Junction's HVAC system will alleviate electricity usage during peak hours, while its grey water system will help lessen the water demand.

CITY LIMITS

Because Newtown was declared a heritage district at the turn of the millennium, strict building limits were introduced. It took almost 10 years for the development to take off. It first had to be advertised in a public, open-tender process and proposals had to be weighed up and negotiated while the developers had to sign up tenants successfully.

De Klerk says the development also required extensive enabling works, including rerouting and enlarging one of the city's principle storm water channels. The process required cooperation of various authorities, who all had to buy into the development's aims first.

The building site was also located above huge quantities of ground water. With excavations that plummet down to 15m below the ground's surface, this meant the project team had to remove some 1500m³ of water per day from the foundation levels.

A portion of the building had to be constructed under the elevated M1 highway. Some of the structure's roof is only three to four metres below Jozi's famed double-decker highway. Also, the floor of the lower retail level is only three metres below the founding levels of the highway piers and columns.

Mentz says the project team had to isolate construction while building around existing highway

piers and columns, and simultaneously ensure the safety of motorists was not jeopardised.

REGENERATION AT THE CORE

Under guidance from dhk, the project team took particular care in creating a structure that connects the past, present and future with vibrant flair, making it an exciting place for people to work, shop and eat.

The project is backed by the Johannesburg Property Company and SAHRA, with a major heritage study undertaken, permits strictly controlled, and work closely conducted with the architects and developers to preserve the unique history of Newtown.

Heritage consultant Herbert Prins says what is especially favourable about Newtown Junction is the benefits it holds for the heritage resources of Newtown.

De Klerk says the architects incorporated existing

SUSTAINABILITY FEATURES

- Designed with natural pedestrian movement in mind
- Low energy material use, such as reduced cement concrete
- Low VOC paints used
- Fresh air ventilation, at 10% per person, exceeds the SANS minimum of 7.5% per person by 40%
- Natural light maximised
- Low energy, high frequency low flicker lighting, predominantly fluorescents with some LED
- 90% recycled steel content
- Energy efficient air-conditioner uses ice storage system
- Photovoltaic solar panel ready



Large atriums with glass ceilings are a feature of the Nedbank campus to improve natural lighting.



About 4 800 people are expected to work in the complex, and the growing number of city residential developments, including nearby student accommodation, will contribute to its general sustainability.

Edwardian, old mining town elements into the design, while retaining and restoring as many of the existing structures as possible.

Many of the old structures originate from the turn of the last century, such as the old Potato Sheds of 1910 – a market relic built next to the railway siding of the day, an Edwardian gentlemen's public toilet, and the old stationmaster's house.

Where there have been new interventions to historic portions of the site, they have been kept clearly contemporary, in contrast to the delicate Edwardian steelwork and detailing. The existing pedestrian railway crossing bridge was also reused, while the original railway became an access road. De Klerk says the natural movement of pedestrians through the site was a key consideration in the design of the building.

Johannesburg's centrality, access to different modes of public transport including the Gautrain

and BRT buses, and cheaper rent are all boons to the project. Tenants include Pick n Pay, Ster-Kinekor, Truworths, The Foschini Group, Mr Price, Busboys & Poets, Life Grand Café, Shoprite and Planet Fitness – all valuable amenities to the growing number of inner city residents.

Studies indicate there will be around 4800 people working in the complex, while the growing number of residential developments in the area, including student accommodation at the nearby old grain silos, will contribute to its general sustainability. The developers are eyeing shoppers across the bridge in Braamfontein as well.

The test for the development, however, is to convince people to shop there by choice for staple goods and not just see it as a place of work. Ultimately, Newtown Junction has the potential to be an economic injection for an ever-changing and regenerating Jozi. **O**

SOURCEBOOK

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Architects • dhk (lead architects) • 011 684 1234 • www.dhk.co.za • Mashabane Rose • 011 486 1057 • www.mashabanerose.co.za •
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