SANDTON GATE PHASE ONE

SANDTON GATE
Sandton

CLIENT
Pod Property Fund

DEVELOPER
Abland
Tiber Investments

PROJECT MANAGER
Abland

ARCHITECT
Boogertman + Partners

QUANTITY SURVEYOR
Quanticost

CIVIL & STRUCTURAL ENGINEER
L & S Consulting

ELECTRICAL ENGINEER
CKR Consulting Engineers

MECHANICAL ENGINEER
C3 Climate Control Consulting Engineers

FIRE CONSULTANT
IFESA

GREEN BUILDING CONSULTANT
Solid Green Consulting

LANDSCAPE ARCHITECT
Landmark Studios

MAIN CONTRACTOR
Tiber Construction

PHOTOGRAPHY
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Abland and Tiber have joined forces to establish Sandton Gate as a world-class precinct. Both companies have brought their expertise in property together to create Sandton Gate as a sustainable and smarter choice for businesses, residents and the general public.

The precinct is strategically located on William Nicol Drive within minutes of Sandton, Hyde Park, Rosebank and Bryanston. Sandton Gate is an ambitious mixed-use development that will seamlessly integrate commercial, residential and retail space with a number of lifestyle amenities in a connected, green, pedestrian-friendly precinct.

The precinct overlooks the Braamfontein Spruit, one of Johannesburg's longest natural greenbelts, while being on the doorstep of South Africa's financial CBD. The developers envisaged less traffic, better business and all round smarter living. Pedestrian walkways will connect each building to the next, giving the precinct a sense of fluidity and energy. Smart streets will allow precinct users to meander through the development to embrace and access all amenities effortlessly.

Functionality, form and the natural surroundings were taken into account when Sandton Gate was conceptualised as a smarter precinct. All structures will adhere to design guidelines set out in the Urban Design Framework document. These guidelines will promote the uniformity of all design aspects of the completed precinct and also enforce the sustainability of the precinct. A number of architectural firms, including Boogertman + Partners and Nsika Architects, will work on different buildings, whilst following the underlying design tenets set out by the Urban Design Framework.

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With a shared vision of demonstrating sector leadership in sustainability, the developers have achieved a first to obtain a Green Star Sustainable Precinct certification for the mixed used precinct under the Green Building Council South Africa's (GBCSA) new Green Star Sustainable Precincts tool. In order to obtain the Precinct Rating, one of the minimum requirements is that each individual building attains a minimum 4-Star Green Star rating.

The development of the precinct is well underway, with Phase One completed and the first residential building under construction.

Phase One

Phase One is comprised of P-Grade office space of approximately 16,000m^2 as well as a Planet Fitness gym facility in the building. The building occupies a prime position facing William Nicol Highway.

Designed by Boogertman + Partners, who were also involved in the development of the masterplan for the entire precinct, Phase One is the first of a number of commercial buildings planned for Sandton Gate. Following on from an emphasis on a smart precinct, smart technology elements have been incorporated into the building, resulting in a 5 Star Green Star Office v1.1 rating.

Concept

The architects followed a very defined brief with the best interests of the client at the heart of the design. This is a speculative building that needed to adhere to very strict common area ratios and project costings. The building was designed to be as cost effective as possible, hence the footprint is also designed in such as way that the developers can obtain maximum yield and flexibility with regards to sub-divisibility. The building is able to be sub-divided into 250m^2 offerings within the 2,300m^2 office floorplate.

Site

Originally there were homes on various erven on the site. Over the years these properties were purchased by the developer and zoning changed from residential to commercial.

The site slopes almost 12m over the portion of the site that accommodates Phase One and slopes approximately 18m to the river edge, so it has quite a deep slope. The large amount of rock on site necessitated design elements to accommodate this. The river edge had to be rehabilitated as water use licence applications required this rehabilitation. A number of indigenous trees on site were transplanted where possible and alien invasive species were all removed.

The Building

Designed over two podiums, the design of Phase One makes use of the existing slope and ensures that the podium on the corner created by the new link road and William Nicol becomes one of the corner anchors for the scheme. The piazza at this level is on grade, connecting the eye visually directly from William Nicol into the scheme. All

the retail components are accommodated on this podium, providing a feeling of activity and connection to the urban fabric.

Dropping down, entry to the scheme is accessed from Minerva Road via the lower level parking. Visitors and tenants can access the retail and Planet Fitness via separate demarcated lift cores. An escalator also allows access from the parking basement and street level to the lower level podium. This podium provides access to the gym and will also act as the connection to future phases of the precinct.

All parking levels offer access to the two lift cores and Planet Fitness has a dedicated lift on all parking levels. Depending on the tenant/s utilisation of the 2,300m^{2}floor space available, tenants can make use of the centralised lift lobby.

Design Language

The Urban Design Framework document dictates the bulk accessibility, the interface between buildings and the street front, as well as the intended connections between the various buildings and podium levels engineering of the podium structures necessitated by the slope of the site. Not as evident in Phase One, these podiums will play a more dominant role in the look and feel of the precinct as it is developed. The urban fabric is very important to the scheme's success.

Throughout the process the design team worked with well know visual artist Hannelie Coetzee, which was a very rewarding process. Her art is going to be exhibited not only on Phase One, but also throughout the entire precinct. The art will be showcased within the built environment as well as the surrounding park spaces. The artworks act as a thread to pull all aspects of the precinct together.

On Phase One, Hannelie's distinctive installation art piece called 'The Narrowing Link" anchors one corner of the building. It was important to the client that the artwork was integrated into the precinct and its urban fabric from an early stage. Sandton Gate has an important connection to green spaces within and adjacent to the built components and the team is currently working with Hannelie Coetzee and Jozi Trails to ensure that the buildings and landscape connected properly and that maximum benefit for pedestrians during both working and leisure hours is maximised.

Façade

The cost parameters specified by the developer also transferred to the building façade, with an emphasis on strict glass to solid ratios. The façade is a lightweight ETICS façade system. Although not used often in South Africa, the team considered it a great façade solution if applied correctly. It was important to ensure that the detailing around the façade was finished properly to make sure that the envelope of the building offered longevity.

Materials

The podium comprises a combination of large urban pavers and natural stone. White stone offcuts from Hannelie Coetzee's stone art works were used in the design of two water features and the transition borders between planters and paving. Retail shops spill out onto timber decks and landscaped planters soften the hard stone surfaces of the podium. The timber has been left untreated to allow it to 'gray out' over time, allowing a seamless visual interface between the pavers and the timber. The podium has been landscaped quite significantly and creates a 'green' infinity edge between the podium and basement edge and the drop below to Minerva Road. The eye is carried over the edge to the green of the landscaped park below, creating a seamless urban green space.

HVAC System

One of the systems that the team is proud to have been a part of is the innovative HVAC system. The building is conditioned by a four pipe chilled water thermal storage system. The phase change material thermal storage system reduces the building's overall electrical consumption by more than 25% when compared to an already efficient chilled water installation, resulting in an average monthly electricity saving of R6.40 per square metre.

The system offers individual control via a variable air volume diffuser. The system is compartmentalised and can be utilised for multiple buildings throughout the precinct. The 20-25% initial additional cost for purchase and installation could be off-putting for most developers but these costs can be recouped within a short time period.

The team were so impressed by the success of the system that they would like to incorporate it into the architectural design of future buildings

within the precinct. This is an HVAC system that deserves to be showcased, not hidden away.

Sustainable Highlights

Sub-metering of major energy consuming systems is in place. Gathering information is key to understanding and managing building systems and to assess opportunities for energy savings. The wireless bleedingEdge Building Telemetry System allows for intuitive access via apps on tablets and smart phones. Users can control and monitor the air conditioning system, lifts, generators, UPS installation, extract fans, basement smoke extraction, sump pumps as well as the fire and security systems.

Minimisation of greenhouse gas emissions associated with operational energy consumption is reduced. An energy model of the building was generated and in the design stages of the building compared to a notional building model. The building design showed an improvement over a SANS 10400 notional building. The building is designed to achieve an energy consumption of approximately 209,5 kWh/m²/annum which amounts to over a 60% improvement of energy use when compared to the notional building. There are potential carbon saving of 251,4 kgCo2 per year compared to a notional building.

Water Saving Initiatives

The water system is estimated at saving ±30% translating to ±2,742kl of water saved per annum. The building achieves savings through the use of water efficient fittings that limit the occupant water usage. Sub-metering of major water consuming systems is in place. Gathering information is key to understanding and managing building systems and to assess opportunities for water savings. The building is designed to reduce the consumption of potable water for the building's fire protection and essential water storage systems.

Sandton Gate is setting the standard for the mixed use precinct in South Africa, creating a smart work, live and play environment that manages to keep a good balance between cost and sustainability.

COMMERCIAL	GLA
Phase 01	15,000m²
Phase 02	11,000m²
Phase 03	11,000m²
Phase 04	15,000m²
Phase 05	15,000m²
Phase 06	13,000m²

RESIDENTIAL	UNITS
Phase 01	72 Units
Phase 02	55 Units
Phase 03	90 Units
Phase 04	55 Units
Phase 05	45 Units

SANDTON GATE PHASES

SANDTON GATE AERIAL PERSPECTIVE