

# Offices



## 2004 - 2023

A 20-year retrospective overview of South African office developments featured in *Architect & Builder Magazine* since 2004

# Opinion

## Shaping the Future of Work: Exploring Modern Work Environments and Their Impact

**N**ever before has imagination been so important in shaping our immediate future. The post-pandemic era offers a unique chance to rethink office architecture, a sector that has seen significant changes in recent years. In 2019, our research division, FuturePart, explored the 'Future of the Workspace.' Since then, the landscape has transformed dramatically. Large corporations have moved away from centralised workforces, adopting decentralised office models. This shift has increased interest in alternative work environments, including co-working spaces and satellite offices in smaller cities which offer employees a better work/life environment.

This change has brought new trends that combine social, physical and digital aspects of workspaces. Companies now focus on design elements that not only boost productivity but also improve employee well-being and encourage staff to come to the office. Health and wellness features, flexible hours, technology integration, and flexible layouts have become key in redefining the office. Workspaces are now seen as more than just places to complete tasks. They are social hubs where collaboration, creativity, and informal learning thrive. Employees now seek environments that offer a sense of community, where they can connect with colleagues and engage in shared experiences. The office is evolving into

a place that supports not only work but also personal growth and interaction.

As businesses adapt to these changes, they recognise the importance of creating spaces that meet diverse needs. Offices now serve multiple purposes: they must be functional, but also inviting and adaptable. The integration of features like open-plan areas, pause nodes, quiet spaces and collaborative spaces reflects this new approach. By embracing these trends, companies aim to create environments where employees feel valued and motivated. This shift in office design is not just about responding to current needs, it is about laying the groundwork for a more flexible and connected future, where the office continues to play a central role in shaping work culture.

Boogertman + Partners continues to be at the forefront of evolving office design on the continent. We have consistently integrated company culture, brand and values into our projects, recognising that while a strong company reputation may attract talent, it is the work environment that retains them.

In this new era, reimagining office architecture and interiors with fresh thinking is crucial. We are not merely designing office spaces, we are redefining what it means to work today. Our goal is to create adaptable environments that go beyond traditional boundaries, meeting the evolving needs of businesses and their

# Offices

by Bob van Bebber  
Director, Boogertman + Partners



employees. Offices must now cater to a wide range of activities, from focused individual work to collaborative team efforts. They need to be flexible, accommodating changes in work styles and technology while providing spaces for rest, socialisation, and informal learning.

This concept is seen in our project, 8 Merchant Place, which enhances the campus's efficiency by consolidating non-core functions into one cohesive space. Though modest in size, this building significantly impacts the daily experiences of staff and visitors. The ground floor includes a staff wellness centre, a restaurant, and retail facilities, providing a convenient and supportive environment. The first floor features a staff gym, promoting health and fitness, while the second floor houses a staff crèche, catering to employees' childcare needs. The rooftop offers an open area for entertainment and exercise, fostering a sense of community and offering space for relaxation and social interaction. By offering a range of amenities and flexible spaces, 8 Merchant Place serves as an example of how thoughtful design can support a holistic work experience.

Through 8 Merchant Place, we demonstrate how office spaces can be designed to meet the diverse needs of modern workforces, supporting productivity and well-being. This approach reflects our commitment to creating environments that are not just functional but also engaging and supportive. This same thinking is evident in some of our past projects, including Discovery

Place, the BMW Head Office, Investec Pretoria, Google Offices in Bryanston and Ghana, EY Mauritius, Momentum Metropolitan Holdings in Sandton and Centurion, and the Department of Agriculture, Land Affairs, and Rural Development. Each project reflects our philosophy of integrating a company's culture and values into its physical environment.

As we look ahead, it's clear that the future of office architecture and interior design is set for significant change. The shift toward flexible, adaptive spaces that foster collaboration and prioritise well-being is already underway. Traditional office models are being rethought, with an increasing focus on decentralisation, hybrid work environments, and the integration of technology to support new ways of working.

Our projects, like the BMW Conversion, showcase how existing spaces can be repurposed to meet the demands of modern businesses. By transforming a warehouse into contemporary offices and training pods, we have demonstrated that office architecture is no longer confined to new builds but is also evolving through innovative repurposing. This approach will play a crucial role in the future, as businesses seek more sustainable, versatile, and engaging workspaces. As we continue to reshape office environments, we remain focused on creating spaces that inspire connection, foster growth, and adapt to the ever-changing needs of the workforce.



# BIGEN AFRICA @ THE INNOVATION HUB

**BIGEN AFRICA @ THE INNOVATION HUB**  
Pretoria

**CLIENT**  
Bigen Africa Group Holdings

**ARCHITECT**  
Boogertman + Partners

**PROJECT MANAGER**  
Pro Arnan

**QUANTITY SURVEYOR**  
Pentad

**CIVIL & STRUCTURAL ENGINEER**  
Bigen Africa

**ELECTRICAL & MECHANICAL ENGINEER**  
Spoomaker & Partners

**FIRE ENGINEER**  
Chimera Fire

**PLUMBING ENGINEER**  
Ramsden Consulting

**SPACE PLANNER**  
DSGN Design

**MAIN CONTRACTOR**  
WBHO Construction

**PHOTOGRAPHY**  
Courtesy of Boogertman + Partners

**B**igen Africa is one of the leading consulting engineering practices in South Africa and has won numerous awards including the SAACE Business Excellence Award for 5 years in a row. It has also won the Sustainable Growth Award in 2005, as well as the PMR Golden Arrow award for the highest regarded large consulting engineering firm in 2000 and was also one of the SA top 500 best management companies.

The company's head quarters are located in Pretoria and due to the sustained growth a new head office building was required. One of the biggest challenges facing the consulting engineering industry is the attraction and retention of very scarce professional skills. International studies have shown that the right working environment can substantially contribute to attracting and retaining young talent. The brief given to Boogertman + Partners Architects was to design a new head office for Bigen Africa that reflects the progressive image of the company, and a working environment that employees would look forward to working in. Bigen Africa wanted a building that would maximise interaction between teams and allow for the projected growth of staff.

On completion of the building, it was evident that expectations were exceeded. Bigen Africa received a corporate head office that is progressive, especially in the engineering environment.



The new R59 million offices for leading consulting engineering group, Bigen Africa, were officially opened by Minister Trevor Manuel at The Innovation Hub in Pretoria in April 2007



The combination of open-plan areas and offices are working well and the spectacular views of natural surroundings of Strubenkop and the farmlands of the University of Pretoria contribute to the special working environment.

Clients are very impressed with the new offices and are proud to be associated with Bigen Africa. The staff is especially excited about their new working environment and are sure to increase productivity and attract new staff to this very special work place.

## Brief

The brief from the client was to design a cost effective office building which could be subdivided for separate letting or future growth should the need arise. The size of the building was predetermined, allowing for future growth

up to 2010. GLA = 5,315m<sup>2</sup>. The building was for the Pretoria Bigen Africa Offices and should not be seen as the Bigen Africa Head Office.

The client wished the exterior finishes to be low maintenance, high quality finishes and the architects therefore opted for Marmoran exterior type finishes to all plastered walls. The entrance and plinth are highlighted by dry packed natural stone work.

The client wanted 80% of the floor plan to allow for open plan workstations and 20% for cellular offices. The architects have also allowed for cellular meeting rooms with a main boardroom. A cafeteria / coffee area with backup kitchen has been allowed for with outside seating area.

The interior open plan area is divided with an interior landscaped courtyard with a rooflight







which allows light penetration from the southern side, but no direct sunlight to facilitate better working conditions.

Access flooring has not been allowed for and distribution of power data and telephones will take place with floor points on a grid layout.

Sufficient toilets with high quality finishes have been provided for – allowances of toilets are as per the Building Regulations.

The entrance lobby area is a double volume area with high quality wall, floor and ceiling finishes.

The building had to provide a minimum of 5 parking bays per 100m<sup>2</sup> of GLA. The precinct development rights require 50% of the parking to be basement parking.



**Parking Provided:**

- Basement - 134 bays
- Ongrade uncovered - 90 bays
- On land parcel - 28 bays
- Total Parking - 252 bays (5 per 100m<sup>2</sup>)

Storage and archive areas have been allowed for in the basement which is ±419m<sup>2</sup>.

Built on ex-university agricultural land, for a prominent engineering company, it was thought appropriate to use rationalism as the architectural language for the building. This rational, Apollonian box is not entirely static as it is engaged by a curved emotive dynamic element that forcefully penetrates the second façade skin leaving an eccentric entrance in its wake, whilst on



exiting, it enfolds the hierarchic boardroom and announces the Innovation Hub Plaza beyond. Apollo and Dionysus are heightened by the presence of their nemesis.

On the front façade, the quiet cadence of the Apollonian colonnade subdues and lulls into a sense of quietude, whilst Dionysus dances alluringly in the background. Balconies and office windows retreat on the harshly exposed west façade.

Internally, the office spaces of ground and first floor, an interrupted doughnut, enfold a space of collective gathering, the atrium, celebrated by the skylight overhead. Servant spaces that define the shorter aspects of the atrium are expressed and denoted by means of a red facebrick.



**Conclusion**

The new R59 million offices for leading consulting engineering group, Bigen Africa, were officially opened by Minister Trevor Manuel at The Innovation Hub in Pretoria in April 2007. According to Bigen Africa CEO, Francois Swart, at the opening ceremony, taking up residence in the new 5,300m<sup>2</sup> headquarters building – Africa's first internationally accredited Science & Technology Park – was a momentous occasion in the company's 25 year history in Pretoria. The building is adjacent to the Sappi Technology Centre. Due to its continued growth, and its positive view of the future and further development at The Innovation Hub, Bigen Africa has applied for a second phase building on the precinct.





# PODIUM AT MENLYN

**PODIUM AT MENLYN**  
Pretoria

**PROPERTY DEVELOPERS**  
Emira Property Fund  
Eris Property Group

**ARCHITECTS & PRINCIPAL AGENT**  
Boogertman + Partners

**PROJECT MANAGER**  
PPM Project Managers

**QUANTITY SURVEYOR**  
Pentad Quantity Surveyors

**CIVIL & STRUCTURAL ENGINEER**  
DG Consulting Engineers

**ELECTRICAL ENGINEER**  
Quad Africa

**MECHANICAL ENGINEER**  
Spoomaker & Partners

**FIRE ENGINEER**  
Specialised Fire Technology

**TRAFFIC ENGINEER**  
Civil Concepts

**TOWN PLANNER**  
Origin Town Planning

**LANDSCAPE ARCHITECT**  
Uys & White

**MAIN CONTRACTOR**  
WBHO Construction

**PHOTOGRAPHY**  
Emira Property Fund  
Boogertman + Partners

Podium at Menlyn has become the gateway to the Menlyn node, which is to become an A-Grade business hub with in excess of 300,000m<sup>2</sup> of mixed use development including retail, offices, hotels and residential units being planned

The three part brief from the client seemed simple enough at the time. Firstly, the design team at Boogertman + Partners Architects had to design a building that would not date. Secondly, the design had to be implemented with materials that were low maintenance, and the building had to be Emira Property Fund's flagship building, and become a Pretoria Icon in itself. The design team translated the brief by creating a striking triangular geometry using low maintenance materials. In 2012, phase one of Emira Property Fund's new office development, Podium at Menlyn, was successfully completed. This iconic building has been a talking point ever since the first off-shutter concrete façade was revealed.

## Design Concept

The seamless triangular union of glass and off-shutter concrete was inspired by ancient engraved artworks found in the Blombos Caves on the Southern Cape coast of South Africa. This symbolises a bridge between a 77,000 year old culture and the future of South Africa. Inspiration was also drawn from the ancient Chinese Tangram dissection puzzle. This puzzle, consisting of seven flat shapes called tans, are put together to form shapes. The design team met the client's "Icon" part of the brief by transforming this ancient game into a magnificent triangular grid which features on the eastern and



PODIUM AT MENLYN



southern façades of the building. The abstract design is produced as a modular unit that can be configured into a geometric grid, making the implementation of the design an exact science and representing a synthesis of mathematics, symbolic systems and art. Even the basement and lift lobby artwork makes use of these tans to create a "geometrical garden" within an urban space, giving one the feeling of being in a digital landscape. The artwork transforms a once dull basement into an exciting space, through which one enters for a day's work. The design suggests both the archaic nature of its origins and the sophistication of 21st century technology.

## Materials

The use of mottled grey and black glass on the façades lent itself to the concept of a triangular

geometry. The design team wanted to achieve contrast with the use of clever materials and a contrasting curtain wall grid was designed. The internal face of the triangular façade is a sharp contrast with the exterior. Instead of the shades of grey on the exterior, the interior consists of shades of white. This is due to the construction process of the laminated safety glass used for the façades, whereby the lamination film is grey and/or black to the outside of the building, but the internal surface of the film is white. This accentuates the grid of the aluminium structure on the inside of the building, a decision made in the design phase, also enabling the end user to experience the geometric grid of the exterior.

As the triangular geometry of the curtain wall is only 2 dimensional, the design team wanted to explore materials that would be able



PODIUM AT MENLYN



to incorporate a third dimension to the triangular forms of the façade. In the end, the most suitable material to achieve this 3 dimensionality was raw concrete, allowing the triangular shapes to transition from 2 dimensional patterns in the curtain walls, to 3 dimensional extrusions within the concrete. The raw concrete juxtaposed with the smooth curtain wall would create a harmonious balance in the design.

The 3 dimensional triangular pattern was a construction feat in itself, constructed by creating 35mm deep recesses within the concrete. The function of the triangular windows is to allow natural light to filter into the internal office space situated behind the concrete feature walls.

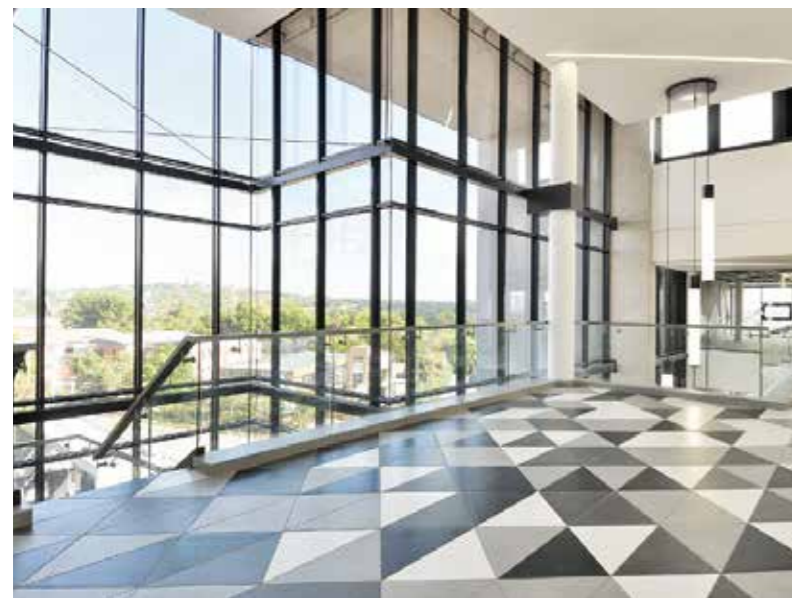
### Challenges

Creating the recessed lines which define the triangular geometry meant that once the shutters were removed there was a risk that the concrete could break out, leaving the face of the walls with ragged edges that would require patching.

Patching of the concrete is a process the entire team wanted to avoid at all costs as the beauty of off-shutter concrete lies in the seamless and sculptural appearance as well as its unique texture. A sample panel was constructed beforehand, allowing the architects and contractors to explore different methods and materials to achieve the desired finish. These methods include:

- The use of fibre reinforced concrete
- The use of self compacting concrete
- The use of premixed concrete with a smaller aggregate.

Another challenge was that the structural engineer required the concrete feature walls to form part of the structural framework of the building. This required portions of the feature wall to be cast simultaneously with the main frame of the building. To deliver the required structural integrity, the construction of the concrete was done as follows:



The down stand portion of the feature walls were cast simultaneously with the first floor slab. Construction with regular premixed concrete as opposed to self compacting concrete was used, as a continuously cast concrete structure was required by the structural engineer. Due to the added cost of self compacting concrete, it could not be used for the casting of the floor slabs. The second cast of the feature wall (first floor to second floor level) was completed using self compacting concrete. On the top portion of the feature wall, a polystyrene pocket on floor slab level served as a permanent shutter for the concrete of the second floor slab.

The second floor slab was cast using regular premixed concrete, with splicing of reinforcing done above the floor slab level. This procedure was repeated for the second, third and fourth floor pours (to the underside of the roof slab)

As with the bottom portion of the wall, the uppermost portion of the wall also required one continuous pour for the structural integrity of the roof slab upstand. This upper portion was again cast using regular premixed concrete due to cost constraints.

The construction joints in the concrete walls were required at very specific heights so as not to impact on the contractor's programme. Numerous consultations between architect, contractor, structural engineer and concrete specialists were held, resulting in a design solution that had no impact whatsoever on the programme of the building.

Two sets of shutters were used for the construction of the three feature walls. A single set of shutters was used for both the eastern and western façade's feature walls. The eastern and western feature walls were phased by levels, i.e. once the first down stand was complete on both the eastern and western façades, the first wall cast on the western wall's shuttering was used on the eastern wall's first cast, and so the process continued. The walls are, therefore, a mirror image of the other.

The second set of shutters was used for the construction of the fire escape stairwell on the southern façade. The utilisation of the same shutter for the construction of the two walls meant a cost saving of 40% on the shuttering.

The contractor approached Lafarge Readymix Gauteng and, in the end, it was decided to use Lafarge's Agilia Vertical self compacting concrete solution. Of the total volume of 11,500m<sup>2</sup> of concrete used, 360m<sup>2</sup> was Agilia Vertical.

What makes this methodology so unique is the fact the building's entire façade grid was set out using the same grid of the concrete feature walls. One would imagine that, due to time and cost restraints, the triangular grid of the feature walls would only be an external surface treatment. However, upon entering the interior of the building, it becomes apparent that the internal faces of the feature walls are, in fact, a continuation of the triangular grid. It is evident that



due to good planning and construction methodology, this feat was achieved without an impact on the contractor's program and the client's budget.

### The Building

The monochromatic triangular façade consists of a 3 shaded curtain wall of grey and black glass which spans the building's south façade, as well as the soft curve of the building on the corner of Atterbury Road and Lois Avenue. This striking feature takes full advantage of its prime location directly across from Menlyn Park Shopping Centre. The curtain wall acts as a mirror to the sky, evolving in colour and intensity as the sun moves across the African sky. In some instances, the mottled façade appears as a single uniform colour from the outside. Breaking the length of the southern façade and anchoring the building to the north, the off-shutter concrete feature walls repeat the triangular module of the façades. The main entrance to the building is a celebration of space with the bold concrete entrance towering the full height of the 5-storey building. This rather humbling entrance is a grand welcome to each visitor entering the Jewel of Pretoria.

The building's northern façade is divided into two main sections. The first section has affectionately become known as the "egg crates", which are sun shading pods created using concrete overhangs and division walls which protect the office space from the midday sun throughout the year. Equally deep concrete sunscreen walls also provide shading from the early morning and late afternoon sun. The combination of the walls and the overhangs create the "egg crates", which has also become a multifunctional space being utilised as patios overlooking the main intersection of Lois Avenue



and Ingersol Road in Menlyn. The northern façade is exposed to direct sunlight throughout the day. To avoid excessive heat buildup, a double curtainwall system was designed. The façade is, therefore, built up of 2 curtainwalls 1 metre apart, of which the external curtainwall ventilates naturally and disperses the heat buildup. The top and bottom of this curtain wall is open to assist the stack effect of heat dissipation within this void.

### Conclusion

The Podium at Menlyn has become the gateway to the Menlyn node, which is to become an A-Grade business hub with in excess of 300,000m<sup>2</sup> of mixed use development including retail, offices, hotels and residential units being planned.





# SAGE VIP

- SAGE VIP**  
Menlyn Maine, Pretoria
- PRECINCT & PROJECT DEVELOPER**  
Menlyn Maine Investment Holdings
- CLIENT**  
Sage VIP
- PROJECT MANAGER**  
Pro Arnan
- ARCHITECT & PRECINCT ARCHITECT**  
Boogertman + Partners
- QUANTITY SURVEYOR**  
Pentad Quantity Surveyors
- CIVIL & STRUCTURAL ENGINEER**  
WSP in Africa
- ELECTRICAL ENGINEER**  
Rawlins Wales & Partners
- MECHANICAL ENGINEER**  
C3 Climate Control Consulting Engineers
- FIRE ENGINEER**  
Trevor Williams Consulting Engineers
- WET SERVICES**  
SJ Franklin
- TRAFFIC ENGINEER**  
Tech IQ Consulting Engineers
- INTERIOR DESIGN & SPACE PLANNING**  
Boogertman + Partners Interior Architects
- HEALTH & SAFETY CONSULTANT**  
Cairnmead Industrial Consultants
- ENVIRONMENTAL SUSTAINABILITY**  
WSP in Africa
- ENVIRONMENTAL OFFICER**  
Golder Associates Africa
- LANDSCAPE ARCHITECT**  
Insite Landscape Architects  
The Gardeners (Precinct)  
Streetscape Architects  
Interdesign Landscape Architects
- TOWN PLANNER**  
Planpractice Town Planners
- LAND SURVEYOR**  
Arno Jacobs Professional Land Surveyors
- MAIN CONTRACTOR**  
WBHO Construction
- PHOTOGRAPHY**  
Courtesy of Boogertman + Partners

The project team was fortunate to work with a tenant that embraced green principles in the design and operation of its new building. From an early stage, the completed project would be certified by the Green Building Council of South Africa. The team worked in close collaboration with Sage VIP, to realise a building custom designed around the client's needs and requirements and fit for purpose, but still allowing for future flexibility. Sage VIP, Menlyn Maine's second building to receive a 4 Star Green Star Design certification also aims to achieve a 4-Star As-built certification.

The tenant required the ground floor of the 30,500m<sup>2</sup> (floor area) building with 560 parking bays to accommodate boardrooms as well as training facilities for its software, and be served by a client canteen. In addition, but separated from the client canteen, the tenant also required a staff canteen with an external seating area. Both canteens, however, had to be served by the same kitchen.

The building, constructed on a consolidated site previously consisting of four residential erven, is a five-storey structure served by a four-and-a-half-level tiered basement parking structure. The structure is a concrete-framed building with the subsurface basement retained by a perimeter retaining wall. Reinforced concrete columns support flat slabs with up stand beams. The building consists of a combination of plastered masonry walls covered with a specialised coating. Fenestration consists of aluminium-framed, double-glazed curtain walls and external shading to control the amount of sunlight entering the building.



SAGE VIP





At the heart of the building, the multiple-volume atrium functions as a gathering space in the semi-public ground floor, accessible to both visitors and trainees. The design of the atrium stair is based on its function as a social interaction space. The stairs become the platform of showcasing and animating vertical movement in the atrium space, encouraging people to use the stairs instead of the lifts. The seamless wrapping of the atrium-passage balustrade with the atrium staircase visually connects the various levels and contextualises human-scale and experience.

On each office level, the atrium is activated by a northern and southern staff pause area or informal gathering space. The glazed atrium roof allows filtered sunlight into the atrium with shadows and light constantly animating the internal space.

The tenant also invested in the design of a unique roof for the building. Instead of the roof accommodating building services only, the tenant required the roof to accommodate urban agriculture as well as a social interaction space for its staff. The 'green roof' is used for urban agriculture, such as vegetable and herb production for use in the client and staff canteen, the surplus being used for bartering with local green grocers," he continues. The green roof acts as the 'fifth' elevation for the future high-rise building and decreases the urban heat-island effect associated with cities.

#### Location and Architectural Concept

The Sage VIP building is situated in the Menlyn Maine Precinct, Pretoria. Its boundary is defined by Aramist Road to the south, Bancor Street to the north and Southern Cross Avenue to the west. The Nedbank regional office is directly across Southern Cross Avenue.

The Sage VIP building responds to the urban street scale by means of a gathering space in front of the main entrance on the south-western corner. The main pedestrian entrance and external gathering space fronts onto Aramist Avenue, which connects the existing vehicular corridors of Lois Avenue and January Masilela Boulevard.

The Sage VIP Building is designed to be simple in nature and to be low maintenance. It is a contemporary and simplistic (sic) building, designed around the tenant's requirements while allowing for future flexibility and conforming to 'green' building practices.

Sustainability and green design principles formed an integral part of the design philosophy in terms of building orientation, limited eastern and western glazing and solar control on the north-facing glazed façades. An automated shading system protects the limited fenestration on the eastern and western façades, the aluminium louvre blades tracking the sun to provide maximum shading.

The Sage VIP Building has an external gathering space at the entrance to the building.



This extends internally to the multiple-volume glazed atrium in the centre of the building. The entrance atrium is accessible to the public, ensuring a viable interaction between public and private space, with a security access point at the entrance to the main atrium. The main atrium space is the private and semi-secure zone of the building and forms a gathering space for the

staff. A staff canteen is located on the ground floor, with external balcony seating areas ensuring visual activation of the streetscape. The first to fourth floors of the building are zoned for private office use. Lobbies within specific departments are accessible with a biometric access control for all staff, ensuring differing levels of security where deemed necessary.







Two visitor shuttle lifts serve the underground car park and end on the ground floor level. Access into the private zone of the building, including the main atrium, is through a security control point. Within the main atrium, the main lift lobby accommodates two shuttle lifts and one goods lift. A series of communication staircases and fire escapes are dotted throughout the structure.

**Menlyn Maine Precinct Overview**

Menlyn Maine in Pretoria endeavours to be the first 'green precinct' in South Africa. The development

will offer a green lifestyle and a responsible living and working environment focusing on energy efficiency and the reconciliation of the natural, social and economic environments on sustainability principles. The desired outcome of a 'green building' is improved comfort level and health of occupants without detriment to the environment.

The Menlyn Maine precinct is the densification of a previous low density residential suburb with an approximate size of 140,000m<sup>2</sup> of commercial office space, 35,000m<sup>2</sup> of retail and dining



spaces, 85,000m<sup>2</sup> of upmarket residential space and 15,000m<sup>2</sup> of luxury hotel space overlooking scenic urban parks.

The encompassed facilities will enable commercial and residential residents to walk or cycle from one facility to the next in a safe and convenient environment.

The urban design is based on the town planning principles of 'New Urbanism' to create a vibrant urban character on sound environmental principles. Urban design consideration was given to connectivity, mixed land use, legibility, walkabil-

ity, robustness, visual appropriateness, biodiversity and security. The character of the precinct's public domain is defined by the piazzas, which visually links a series of green urban spaces with parks, playgrounds and attenuation ponds.

Menlyn Maine is partnering with the Clinton Climate Initiative as one of the chosen 16 worldwide projects with the aim of a 'climate-positive development'. It is also registered with LEED ND. Menlyn Maine will undoubtedly add value to Pretoria as a business, leisure and residential destination.





# 102 RIVONIA ROAD

**102 RIVONIA ROAD**  
Sandton

**DEVELOPER**  
Eris Properties

**ARCHITECT**  
Boogertman + Partners

**PROJECT MANAGERS**  
SIP Project Managers

**QUANTITY SURVEYOR**  
BWR Quantity Surveyors

**MECHANICAL ENGINEER**  
Spoormaker & Partners

**CIVIL & STRUCTURAL ENGINEER**  
Zutari

**ELECTRICAL ENGINEER**  
WSP in Africa

**WET SERVICES CONSULTANT**  
IZAZI Consulting Engineers

**FIRE SAFETY ENGINEER**  
Specialised Fire Technology

**LIFT CONSULTANT**  
Projitech

**SUSTAINABILITY CONSULTANT**  
WSP in Africa

**SAFETY CONSULTANT**  
Cairnmead Industrial Consultants

**ACOUSTIC ENGINEER**  
Pro Acoustic

**KITCHEN CONSULTANT**  
KDH Catering Design Concepts

**LANDSCAPE ARCHITECT**  
Insite Landscape Architects

**INTERIOR DESIGNERS &  
SPACE PLANNERS**  
Savile Row

**PROJECT MANAGER FOR EY**  
Baseline Project Management

**MAIN CONTRACTOR**  
Concor (formerly  
Murray & Roberts Construction)

**PHOTOGRAPHY**  
Michael Schmucker

The site is bounded by Rivonia Road to the north, Johann Street to the west and Katherine Road to the south

The building consists of two conjoined towers, one of which is the new Head Office of leading international firm, Ernst & Young (EY) and the other a multi-tenanted 13 storey tower. The client brief highlighted certain criteria in respect of the property requirements and design. The following conditions needed to be considered:

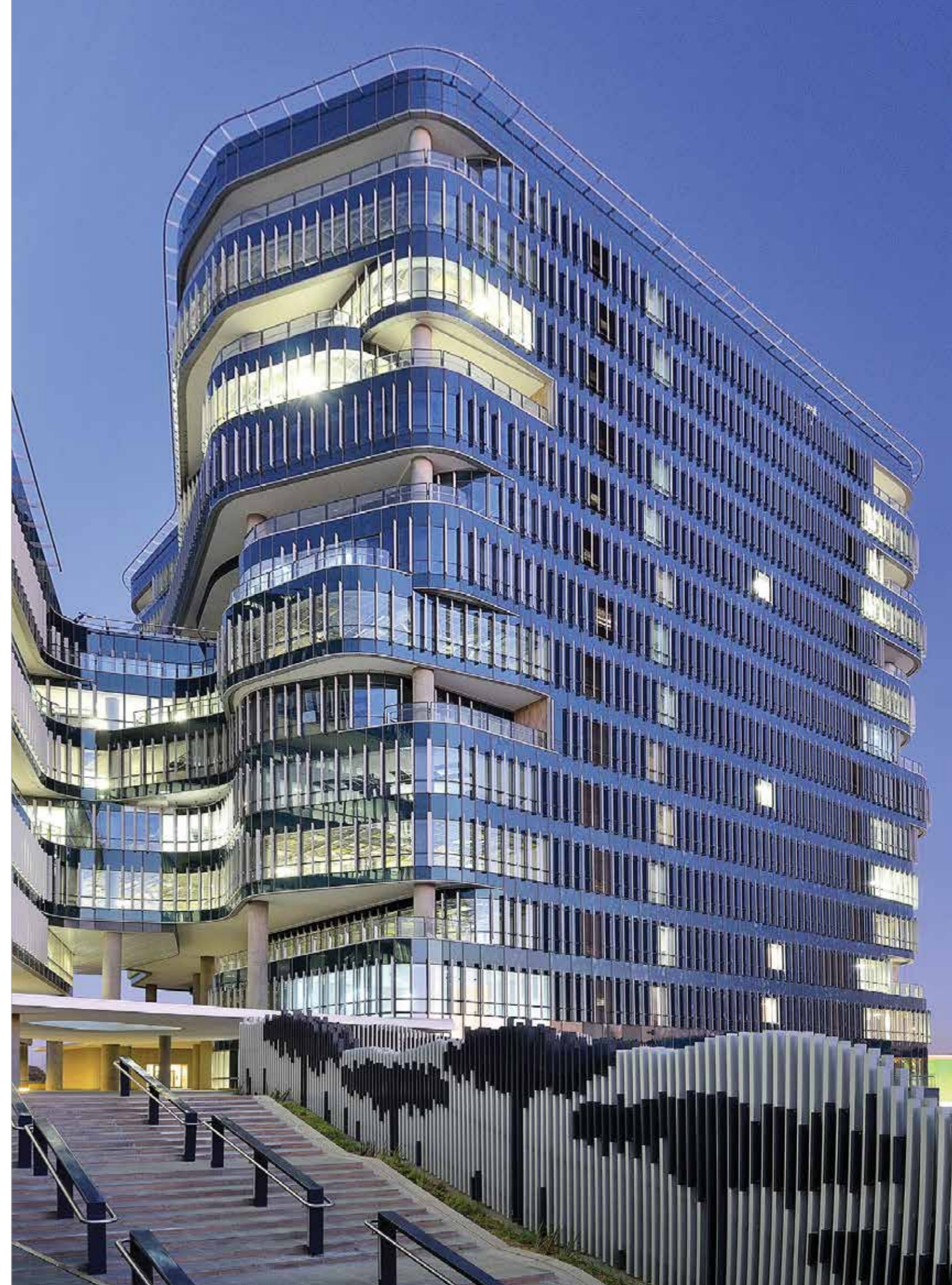
- Location and accessibility to major transport and the Gautrain.
- Visibility and exposure.
- Large floor plates with flexible and efficient space.
- Safe, healthy and pleasant environment.
- Low to medium rise (Max. 8 storeys) with adequate parking.
- Green star rating.

With regards to design, the brief required the design, quality of finishes and services to reflect EY's culture of integration, professionalism and excellence. The building needed to reflect "Quality in Everything We Do" to its clients and people. The building was required to take cognisance of the following:

- The architecture needed to have a 'relevance to place'. It needed to represent EY 'Africa' through use of form, local materials, textures and finishes.
- Integration and flexibility of space to allow for easy change and adaptability in the future.



102 RIVONIA ROAD







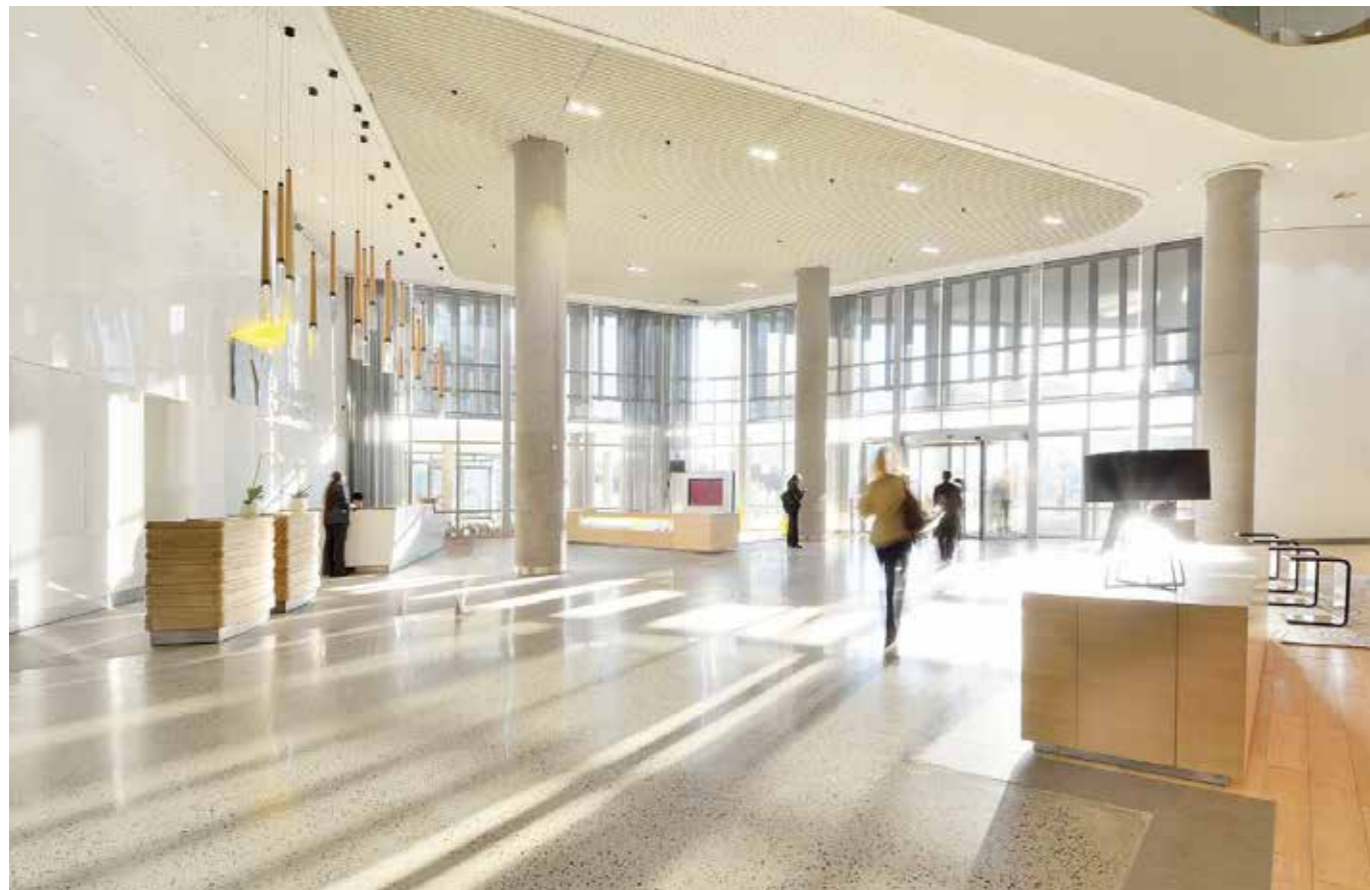
- The building should reflect the EY ethos and purpose, described above.
- The building should reflect the EY brand.
- The building should have a good market visibility and presence.

The site is bounded by Rivonia Road to the north, Johann Street to the west and Katherine

Road to the south, as well as the newly introduced mid-block connector to the east that is shared by the eastern neighbours, Alexander Forbes.

#### THE DESIGN

The development is made up of three distinct elements, namely a nine level parking and basement



structure with two buildings on top of an accessible podium. The EY building, Tower Block 1, is located along the eastern boundary of the site comprising 7 levels totalling 21,716m<sup>2</sup>. The multi-tenanted building, Tower Block 2, is located on the western boundary, comprising 14 floors totalling 15,394m<sup>2</sup>.

The building responds analytically and fluidly to the organic interior and exterior space planning, blurring the interface between the active and passive, public and private as well as building and landscape.

The design consists of a 7-storey building with an active atrium space, animated by transecting stair and bridge links, together with a 13 storey office tower connected by a 5 storey high link bridge which allows for future flexibility. The visibility and legibility of the building afforded by the site, is further enhanced by the two storey podium upon which it sits.

The built footprint is 98,800m<sup>2</sup> and the development rests on nine stories of basement parking including service areas, cold rooms, electrical plant rooms and water storage tanks. There will be a total of 1,051 staff parking bays and 100 visitors parking bays in the EY block, with an additional 527 staff and 55 visitors parking bays for Tower Block 2.

Vehicular and pedestrian access onto the site is controlled within the boundaries of this podium, with separate vehicular entrances for the office buildings and their services off the midblock connector and Johan Street. A grand sweeping staircase off Rivonia Road creates a seamless transition for pedestrians from street level to the podium that celebrates its views over Sandton with a hard and soft landscaped extension of the open public street that can be secured after hours.

#### FAÇADE

The variable nature of the internal functions of the building manifest themselves as floating floor planes that create overhangs and protrusions, further enhancing the organic relationship between the façade and the horizontal flow of the spaces.

In order to create such vertical fluidity, a unitised glass façade was adopted and articulated by vertical fins rotated at 3 degree increments, that control natural light into the open office environment; the centres of which are defined by their orientation on the façades. The façade was constructed from a unitised performance glass with a light tint in a double glazed unit.

#### ENVIRONMENTAL STRATEGY

A 4 Star Green Star SA Office V1 Design rating was achieved in January 2014. The environmental strategy includes:

#### Energy Efficiency

- Natural light is filtered into the office spaces thus avoiding the need for artificial light and reducing the energy demand for lighting. External shading devices and blinds prevent the excessive heating of the office space, reducing the need for air-conditioning.
- Lighting is controlled in the open plan offices with occupancy sensors, in zones that do not exceed 100m<sup>2</sup>, while smaller rooms and media rooms have individual switches. All the office spaces maintain a lighting power density of 1.89 W/m<sup>2</sup>/100 Lux.
- The building management system (BMS) monitors and controls most electronic equipment and serves as an early warning to problem areas.
- Most of the hot water supplied to the WC's, pause areas and kitchens for both towers is supplied by heat pumps.
- With all these energy efficient features the building is approximately 50% more efficient than the notional building, with a reduced energy reduction of 214.7Kwh/m<sup>2</sup>/year.

#### Water Conservation

- Rainwater is captured in a 72,000 litre tank. A further tank provides 84,000 litres. These storage tanks are located in the basements.
- Separate pipes supply rainwater to toilets and urinals for flushing, thereby decreasing the







need for potable water. Potable water use is estimated at 0.48L/day/m<sup>2</sup>.

- Water efficient sanitary fixtures have been installed within the building. This reduces the amount of potable water required and further reduces the amount of water drained down into the sewerage system with an estimated 0.57L/day/m<sup>2</sup>.
- Fire Systems testing in buildings is typically responsible for millions of litres of water wasted due to weekly routine pump testing and other tests to the systems.

This water is heavily oxidised and not suitable for reuse and would normally be discharged to the sewer. To preserve the potable water, wastage isolation valves are fitted on every floor to ensure individual draining of each floor. This means that in cases of malfunction, only the relevant floor can be tested and drained without draining the fire system for the entire building. 99% of the water used in routine testing is recycled back into storage tanks. These design strategies allow for a saving of millions of litres of water per annum.

#### Resource Efficiency

A waste management plan was implemented to reduce the amount of construction and demolition waste going to landfill by 70%.

The project design and construction processes have identified opportunities to reduce the production of construction and demolition waste and identified suitable recycling/reuse opportunities.

Easily accessible recycling waste storage stations for cardboard, paper products, glass, plastics and metal have been provided.

Passive design strategies, which were extensively modelled by WSP in Africa's Green by Design team, have been incorporated to reduce the amount of energy needed to achieve a comfortable indoor temperature. For example, Tower Block 2 (consisting of concrete walls and brick cavities) is orientated on the western side of the building therefore decreasing the exposure of the building occupants to the excessive



heat by solar penetration. The entire structure is covered with external fixed vertical shading devices. There are approximately 5,000 devices, each with different angles as required around the curved surface to prevent the glare into the office space.

The electrical, mechanical, wet services and fire extinguishing systems are all efficiently controlled by a Building Management System (BMS) to ensure that all these systems are monitored and managed to reduce overconsumption and maintain efficiency.

A Green Star building is not just about the new initiative technology and systems that operate within it, but should serve the users to offer it the best environment. Boogertman + Partners did an excellent job in encouraging the social function of the building by creating a platform for people to gather before entering their workspace on the podium. Additionally, within the EY Tower, the criss-crossing bridges above the atrium and the use of natural light create a comfortable and visually appealing working environment that promotes internal communication and interaction.







Building users have access to fresh air where they need it. Within the EY Tower, fresh air is distributed through the access flooring to users at 7.5 l/p/s, which is more than required by SANS 10400-O. The increased fresh air rates maintain the general airborne contaminants at concentrations below exposures that have potential to cause adverse health effects. The HVAC systems consist of 3 air-cooled chillers located on the roof. Primary and secondary pumps are used to circulate the chilled water to decentralised air handling units on each floor. Insulated supply air ducts and variable volume controls supply air to the office spaces. The air is controlled through a wall mounted set point adjuster (serving 35m<sup>2</sup>), allowing occupants to adjust the desired temperature set point.

#### INTERIOR DESIGN & SPACE PLANNING

The first brief or project objective from EY to Interior Design consultants, Savile Row, was “do we stay at our old Wanderers Offices or go”? In order to answer this question a workplace audit was performed, which entailed time & motion studies, online staff questionnaires and individual interviews. This, combined with a process of workshops with EY, allowed the development of a strategy and criteria for what their workplace of the future should provide for and look like. This informed the business decision to move to 102 Rivonia Road.

#### User-centred Productive Workplace

A Workplace Audit gave insight as to how EY staff were working and highlighted the shortcomings of their old office space. This insight led to the development of solutions and creation of new work settings that would better support the staff’s actual work needs. As much of the staff are a mobile workforce it made sense to employ an Activity Based space planning philosophy.

An Activity Based Workplace (ABW) is about much more than desk sharing or hot desking or hotelling; it is about providing a greater choice of how people can work. It does not take away things (like people’s desks!). In fact an ABW provides more (more facilities, more variety, more amenities) to enable people to more effectively undertake their work where a variety of spaces are provided that give staff a choice of where and how to work depending on the work task.

The ratio and type of space was informed by research on EY’s work habits combined with future needs. It can be noted that in most areas, from the Work Café to Pause areas, staff have



access to power and WiFi so that they can focus in solitude or brainstorm with colleagues.

It was also important to create an environment with high visual interest, hereby avoiding the usual overscaled and inhumane public arrival space, leading onto a vast sea of open plan desks, laid out with mind numbing repetition, that results in a visually bland noise of boredom. The use of shots of colour in the environment is there to break visual monotony, as well as to illustrate choice and to inspire EY employees. Variety in the types of workspaces and furniture used, as well as materials chosen (coloured carpeting & wall panelling, light oak timber, marble and white and charcoal detailing) also create interest. Maintaining attention to detail throughout the design process, from space planning to joinery detailing, to custom designed furniture and even custom signage, has resulted in a workplace that is layered with detail and inspiration. The placement of the Green Wall in reception was also deliberate, as vegetation or planting in an environment is proven to lower noise levels, increase positive feelings, improve air quality and reduce stress.

Sustainable initiatives included maximising access to natural light and views by keeping built zones away from the perimeter. Glazed partitions to meeting rooms rather than solid partitions have been used wherever possible and in training areas walls are operable so that spaces are flexible and dynamic.

Acoustics have been considered with noise minimisation features on the open floors. These include using sound absorbent materials wherever possible. Carpet, fabric workstation screens, acoustic ceiling tiles, suspended acoustic panels and padded wall treatments have been used in

more collaborative areas where there is a denser population and therefore higher noise levels.

Each furniture piece is ergonomic and physically supports the user. Use of planting, specification of furniture and selected finishes, including low VOC paints, reduction of PVC use and energy efficient lighting assists in the adherence to the Green Star code.

#### CONCLUSION

The development is a uniquely sculpted building that emanates timeless professionalism and creativity, unlocks the potential for an adaptable working environment, resonates with the heart and soul of the work environment and its immediate context and creates a rhythm that establishes itself within a uniquely African environment.





# THE TOWERS

## THE TOWERS

Cape Town

## CLIENT

Redefine Properties

## PROJECT MANAGER

BFH de Jager

## FAÇADE ARCHITECT

Boogertman + Partners

## PARKADE & PUBLIC AREA ARCHITECT

Smuts & Boyes

## INTERIOR ARCHITECT

JLB Architects

## QUANTITY SURVEYOR

LDM Quantity Surveyors

## STRUCTURAL ENGINEER

Zutari

## MECHANICAL ENGINEER

BVI Consulting Engineers

## ELECTRICAL ENGINEER

QDP Lighting & Electrical Design

## LIFT ENGINEER

Solutions for Elevating

## FIRE CONSULTANT

SolutionStation Consulting Engineers

## HEALTH & SAFETY CONSULTANT

Frontline SHEQ

## ENVIRONMENTAL

Ecosence

## BUILDING MANAGEMENT

First Air

## LANDSCAPE ARCHITECT

Square One

## INTERIORS - REDEFINE

Source Interior Brand Architecture

## MAIN CONTRACTOR

Concor (formerly  
Murray & Roberts Construction)

## PHOTOGRAPHY

Adam Letch  
Inge Prins Photography  
Infrastructurephotos (Aerial)

The fins on the façade reinforce the dynamic nature of elevation

The redevelopment of The Standard Bank Building, now known as The Towers, on Cape Town's Foreshore ranks as one of the most important and ambitious refurbishments in the City for decades. Redefine Properties Limited have invested heavily in a project that appears to have been the catalyst for the renaissance of the dated Foreshore precinct.

## Developmental Background

Developers, Redefine Properties Limited, started looking at various concepts relating to the redevelopment of what was then known as the Standard Bank Building more than five years ago. The reason for the decision was two-fold:

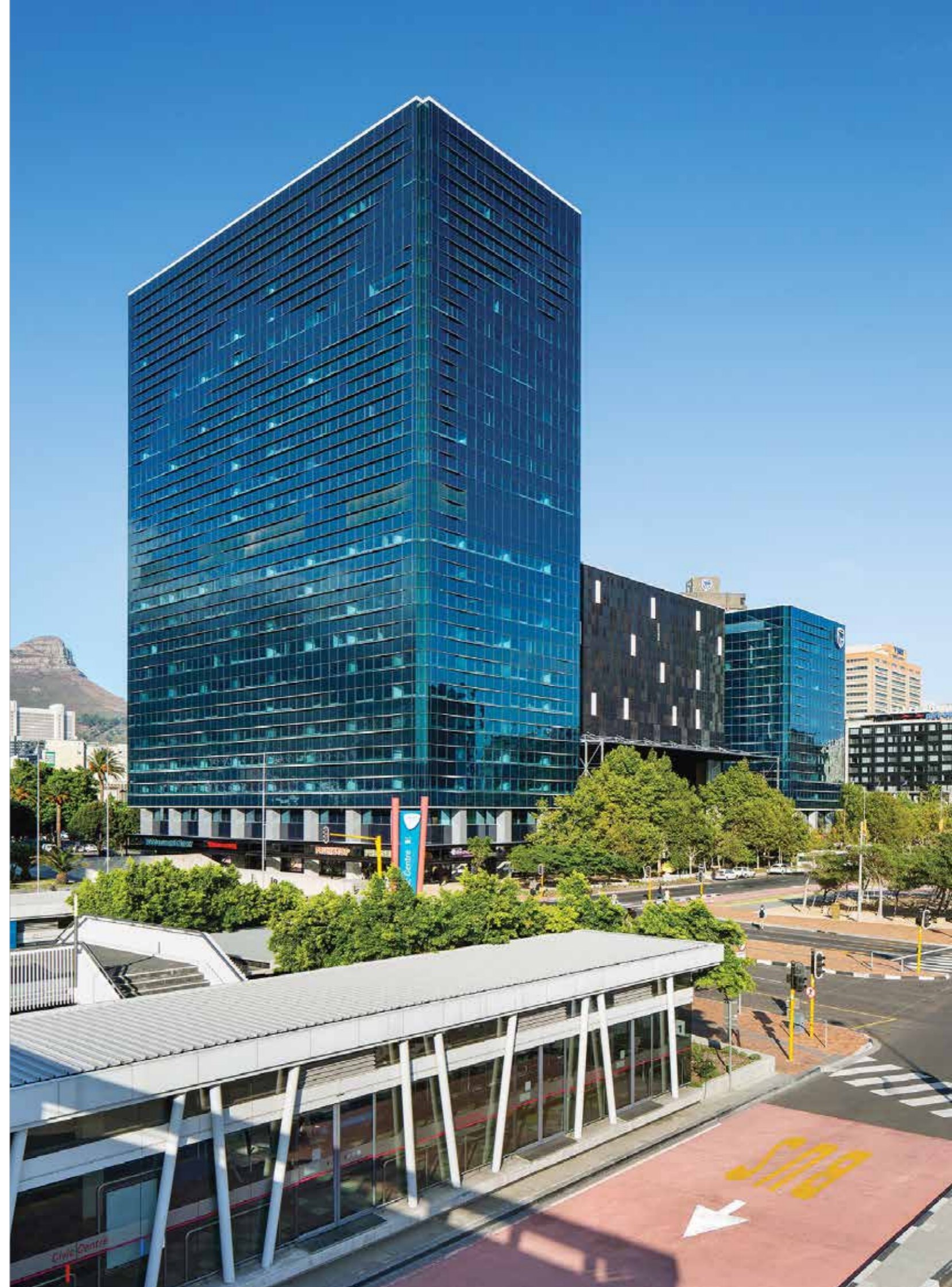
## Parking

The existing parking within the building was inadequate for the requirements of the numerous high profile, A Grade tenants. With an original GLA of approximately 57,000m<sup>2</sup>, the parking ratio was less than 1 per 100.

Options for the extension of the parking included a subterranean excavation underneath Hertzog Boulevard. Although the City of Cape Town was prepared to work with Redefine on this proposal, the fact that the excavation would have essentially amounted to a 'mining' operation, made this option non-viable.



THE TOWERS





RIGHT:  
The original Standard  
Bank buildings



#### Aging Building and Infrastructure

The existing building consisted of two towers linked by a four storey structure. Although ongoing maintenance and upgrades had been undertaken over the years, the original building, built in 1972, had become a 'tired old lady'.

Despite its age, its location and size meant that the building was one of the highest valued assets within the Redefine portfolio and the highest in the Western Cape at that time. This led to the decision to invest significantly in a substantial upgrade to the property.

Various upgrade proposals were considered, from a cosmetic 'touch up' to a futuristic redesign more suited to the Sandton skyline than the

Cape Town foreshore and the vision of the City. The decision was eventually made to upgrade the façades of both towers and incorporate an additional parking and office structure between the two.

#### Design and Planning Process

Redefine developed a very positive relationship with the City by entering into talks at a very early stage. This was achieved through a charrette process. A charrette is an intensive planning session where the city, designers, developers and others collaborate on a vision for development. It provides a forum for ideas and offers the unique advantage of giving immediate feedback. More



importantly, it allows everyone who participates to be a mutual author of the plan.

Thanks to the success of the planning process, final approval from the City, including meeting the requirements of the City's Tall Building policy and wind studies, took approximately 14 months as opposed to a more standard time period of 24 months.

The co-operative nature of the charrette process facilitated the pre-approval of building works up to the 5th floor on the new central structure prior to final planning approval.

As the new parking structure design extended beyond the property lines, Redefine has leased the land on the ground floor and public open space from the City. The bulk air rights for the cantilevered structure that extends 7 metres out from the building line were purchased from the City.

#### Main Retail Tenant

A detailed shopping analysis of the area as well as a shopper profile revealed that there was no major food retailer servicing the lower Foreshore, an area which included the City of Cape Town's main council building.

Food Lover's Market were approached to occupy the main retail space at the base of the central structure spanning the two towers. This has proved very successful and has provided a much needed grocery and food retail option for the many office workers in the area.

#### Refurbishment Process

Three firms of architects worked cohesively together in a Joint Venture partnership:

- Boogertman + Partners: exterior and façade.
- Smuts and Boyes Architects: design and integration of the parking structure
- JLB Architects: Main lobby and Standard Bank lobby design

Credit should be given to the Main Contractors, Murray and Roberts, and the Project Managers, BFH de Jager, for the organisation of the construction programme. Demolition and new construction was scheduled so accurately that there were no time delays experienced due to lack of co-ordination.

Redefine definitely feels that a precedent has been set with regards to the efficient installation of a new façade in a live, occupied building.







#### Structural Considerations

The existing 3 level basement was a key structural component that was essentially supporting the two towers. Foundations were cast within the existing basement and new columns were extended through the core of the building – punching through the floor slabs as the columns were extended.

#### Exterior Design and Façade

While the building represented a triumph of precasting on its original completion, the external finishes, composition of forms and fenestration had not weathered well and the building had not aged gracefully.

Renovation was evaluated and weighed against a range of alternative interventions and given the dramatic planning interventions which would be implemented, it was decided that the aesthetic proposal should be as bold and that the building externally should reflect the radical planning changes being made. The exterior needed to express this bold new agenda and allow the building to form a proud and distinctive part of the Cape Town skyline.

To achieve this, Redefine selected Boogertman+ Partners as architects to work with them on developing the proposal. Contextual references were collated, site informants gathered and cues sought in international best practice. These were workshopped in a structured process with the City to allow the responses to be tested against the City's urban plan and to optimise The Towers contribution, both at the fine grain of the pedestrian circulation and interfaces as well as at the cityscape level.

Once the principles were bedded down and agreed upon, an intensive series of conceptual design developments, seeking ways of meeting these requirements commenced; with feedback from the specialist façade consultants, Pure Consulting, these were developed into workable systems for discussion with Redefine.

#### Façade Design

The final double glazed proposal used a moderately reflective external high performance pane which, while expressing the form, also allows for the reflection of the sky and surrounds, creating a dynamic surface, the inner pane is clear. The fins reinforce the dynamic nature of elevation creating a horizontal dimension both by their physical projection and by the shading effect which creates an illusion of the glass panels

being recessed in curves. The fin configurations are conceptually derived from the topographical features facing each of the façades, Lions Head, the Peninsula and Robben Island. These features are emphasised at night when the LED lighting highlights the outlines and the façade literally becomes a giant map.

The slightly clumsy chamfers at the corners have been replaced with more delicate birdsmouths which still respect the original intent of the forms in meeting the corners.

#### Parking Garage

The new parking garage forms an important part of the overall composition forming the link element joining the two glass towers but with its own expression, reflecting the modular nature of the glazed office towers in its façade arrangement but expressing the dynamic by a variance in colour rather than shape.

A giant canopy spans the public area in front of the parking garage, linking it to the towers situated on either side.

#### In Situ Tenants

While developing the conceptual schemes, a fundamental requirement was that the entire activity would take place in and around an operational building. Simply this meant that an external envelope needed to be created before the internal (existing exterior) could be punctured or removed.





The eventual solution was to create an external skin for the building from the top down. This retained the watertightness of the structure and kept dust and debris out of the building, allowing floors to be skinned externally and then have the windows removed at night internally and new cills and soffits installed as the work progressed. This was an interesting reversal of the conventionally bottom up construction process. A by-product of this process has been the reduction in damage to the new façade due to work being carried out below the finished façade rather than above it.

The process requires strong communication with tenants to keep them informed of the process and to manage their interface with the programme of the works. Redefine worked closely with all the stakeholders to produce a comprehensive tenancy handbook that would ensure limited disruption for the tenants.

#### Façade Lighting

When QDP Lighting and Electrical Design were approached to be a part of the team to upgrade the existing building, one of the main objectives was to create a modern building with integrated façade lighting. The lighting solution was to be both bold yet conservative and take cognisance of the green building requirements, whilst also retaining the historical story of the older buildings in Cape Town and the natural surrounds.

Further to this, aspects such as ease of maintenance, low running costs and longevity of the installation also needed to be taken into account.

After many design sessions, it was apparent that the answer to the above was to use low wattage LED strip lights, mounted into aluminium channels which were in turn clipped onto the edge of each 'image depicting' fin. The fins were specifically designed to accommodate the LED channels, as well as providing integral wire-

ways to LED strips further along each fin. This fin design allowed the reduction of the profile size of each LED channel - in turn making the installation barely visible during the day.

By using LED's in lieu of other lamp sources, the installation deals with most of the design criteria which QDP set out to achieve. These include longer lamp life, lower wattages, high luminous intensity and defined beam angles. The result is a high impact, low energy design with minimal spill light. To conform to Green Building requirements, the fins are also angled slightly downwards, preventing the LED's from creating sky glow.

Due to the 'clip-in' installation method, the LED strips can easily be replaced if need be (there are no mechanical fixings on the outside of the building). The power suppliers which feed the LED strips are all housed remotely within the central lobbies on each floor of the buildings. This results in ease of access as the life span of the power supplies are sustainably less than that of the LED's.

Lastly, the aim of the installation was to accentuate and complement the various façade images being portrayed. The layout of the LED's was therefore dictated by the outline of each image, so that the 'story' being told can be appreciated during the day as well as at night.

#### Landscape Architecture

In exchange for developmental rights above a significant urban square in the city which was in need of upgrade and replacement, Redefine appointed Square One Landscape Architects to redesign this public open space as an 'urban sanctuary' within the exposed Foreshore environment.

Within the square, Square One explored the design of sustainable urban drainage systems as the structuring elements for public place-making while facilitating convenient pedestrian movement and connections to the public transport network. The detailing of the square evokes a marine / wharf environment, referencing the geology and landscape that existed before the Foreshore was reclaimed.

Above the square, rainwater is harvested from the roof of the parking garage, stored in tanks and used to irrigate the expansive green façades that span the sides of the building. Overflow water is directed down the enormous columns within the square and into relaxation chambers to dissipate the energy from the fall. The water is then channelled into bio-filtration basins, where it sustains indigenous wetland species and is able to percolate into the groundwater, minimising the burden on the city's stormwater infrastructure. Polished concrete flooring beautifully reflects the filtered sunlight streaming through the vast urban pergola



that spans the plaza, while seamlessly integrating the various components of the design. Hardwood timber from harvested invasive Sugar Gum trees softens and warms the plaza with decks, seating and pergola covered bar counters.

Adjacent to the square, the developers agreed to extend the landscape towards Hertzog Boulevard, where existing trees were supplemented to create a consolidated and striking Plane tree avenue that provides a sheltered connection to the city. Earth berms and planting provide shelter to the seating alcoves along the avenue.

The plaza is enormously popular and has already become one of the most vibrant urban rooms in the city while successfully integrating engineering and ecological function.

#### Sustainability

The redevelopment has significantly improved energy efficiency at this property.

The Towers is likely to get a 3 or 4 Star Green Star SA rating from the Green Building Council of SA on completion when it is certified. In terms of the existing building rating tool, further annual assessments will follow which allow asset management to improve the rating further as time proceeds.

It has been challenging to make changes to an existing building that has only managed to get a 2-star rating for energy efficiency, while it was still occupied by tenants. The Towers remained operational throughout the upgrade, and formed part of the Green Star SA Existing Building Performance pilot programme.

The new flushed glazed system on its external façades will reduce the cooling demand by

approximately 30%. Redefine is also investigating the installation of photovoltaic solar panels on the tower roofs, to save energy. The common areas of the building have been fitted with energy-efficient lighting using timer controls and the lights in these areas will be automatically switched off when not in use.

#### Conclusion

The Towers can be seen as a highly successful refurbishment of one of Cape Town's iconic Foreshore buildings: due not only to the striking glass façade reflecting the history and topography of Cape Town but also the efficiency with which this project allowed a working building to continue operating throughout a comprehensive structural and design process.





# PPS CENTURION SQUARE

## CLIENT

PPS Property Fund Trust

## ARCHITECTS & INTERIOR DESIGN

Boogertman + Partners

## DEVELOPMENT MANAGER

Kale Developments

## PROJECT MANAGER

LEAD Project Management

## QUANTITY SURVEYOR

Pentad QS

## CIVIL & STRUCTURAL ENGINEER

SCE

## MECHANICAL & ELECTRICAL ENGINEER

Spoomaker & Partners

## WET SERVICES

Shared Energy Management

## FIRE ENGINEER

Chimera Fire Protection Consultants

## GREEN BUILDING CONSULTANT

LMC Green Consultants

## MAIN CONTRACTOR

Tri-Star Construction

## PHOTOGRAPHY

Marc Thomas (Exteriors)

Graeme Wyllie (Interiors)

This new development, in the heart of the Centurion CBD, designed by Boogertman + Partners, consists of two open plan office buildings constructed in two phases, with a total gross lettable area of around 23,000m<sup>2</sup>. The building was designed for the client, PPS, a leading financial services provider.

Tiffany Boesch, Group Financial Director of PPS, said the company was proud to be part of the development as it is PPS Property Fund Trust's latest green office development. "Investing in green technology will not only lead to cost reductions in the long term, but will also result in reduced use of resources and have a positive impact on the health and wellness of the occupants and surrounding community," she said.

## Brief

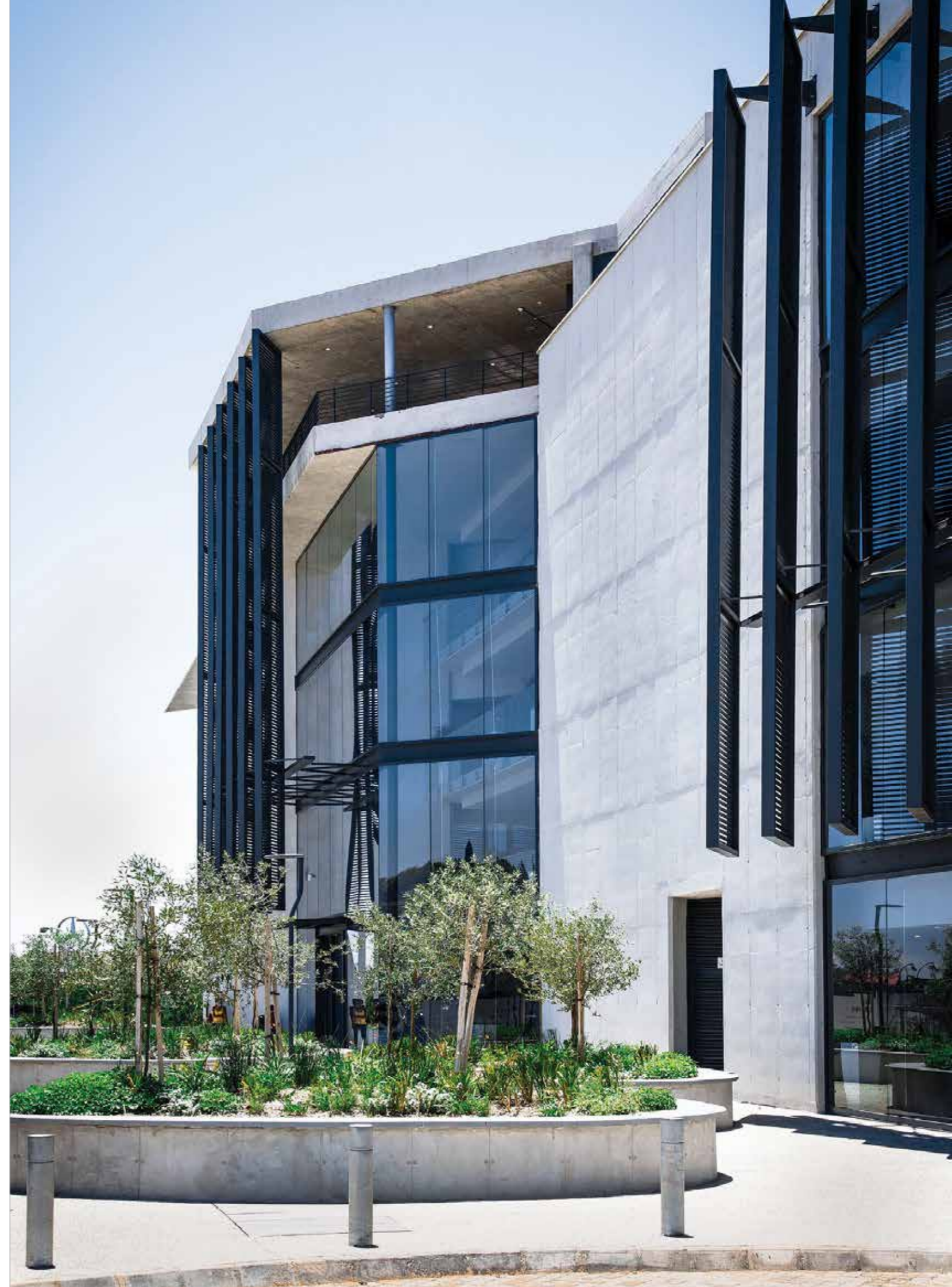
The client brief was to maximise the available bulk on the land in order to provide sufficient space for the PPS Group's Centurion HQ in phase 1, along with other tenants in the surplus space. Phase 2 would be entirely leased to other tenants. The brief also involved the creation of a memorable place within the urban context which would refreshingly allow the free flow of pedestrian public through the development.

## Site

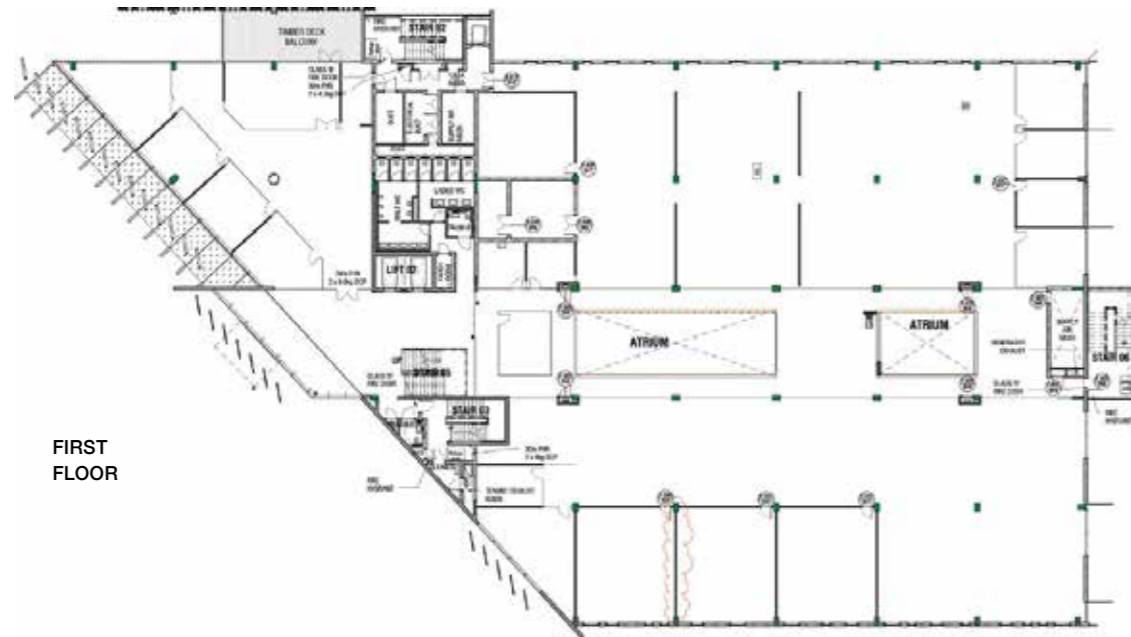
The site, which previously consisted of an open parking area, is bound by existing buildings with extensive servitudes and dolomitic ground conditions that proved to



Large pebble shaped planters with mounded earth and small trees also double as informal seating places







FIRST FLOOR

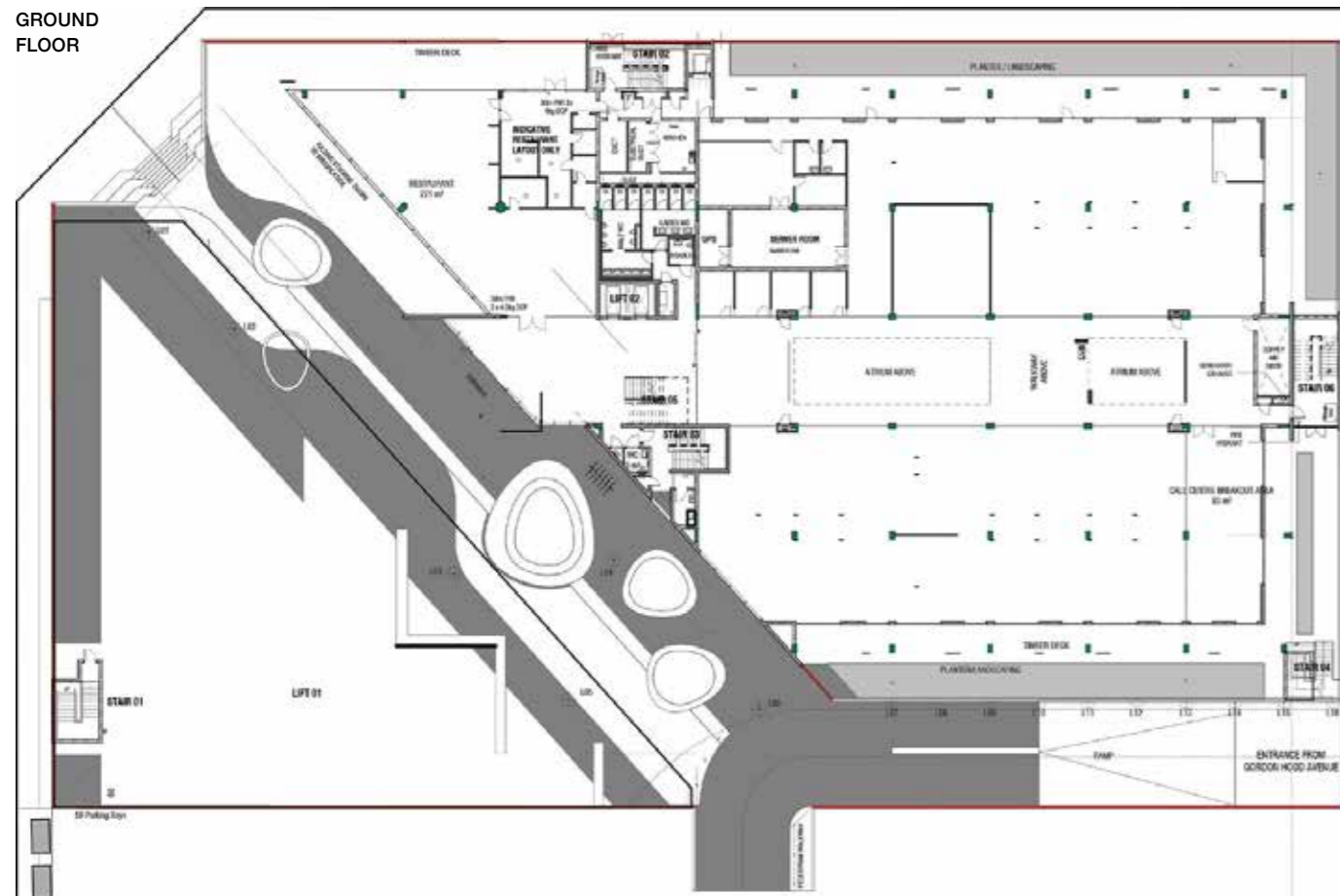
be quite challenging. The layout of the two office blocks create a landscaped piazza on the south western side of the site and a diagonal 'street' in the negative space between the two buildings to draw pedestrians through from the north eastern corner.

Large pebble shaped planters with mounded earth and small trees also double as informal

seating places, whilst the building perimeter features planters with hedges to ensure privacy for the ground floor occupants.

**Design**

Given the depth of the floor plates and 'squat' proportions of the offices, a central atrium along the length of each building was introduced to



GROUND FLOOR



enhance natural daylight into the building and to create the option of further dividing each floor plate should multiple tenancies be required in future. These atria, being open to each floor level, would also increase connectivity and communication between the various office levels.

The triangular corners created by the north/south 'splice' on the north corner of the site, are seen as prominent parts of the buildings where executive offices, receptions and boardrooms are located. Restaurants are proposed at ground floor level with extensive decked outside seating areas.

**Façade**

Externally, these acute glazed corners provide opportunity for some 'drama' and definition to the entrances, in contrast with the remaining façades which are treated as calm but highly articulated compositions. These feature innovative full height strip windows of various widths with operable external shading louvres, all flush within the thickness of the brick external walls. The brickwork is bagged and painted selected stock bricks to create a textured surface to contrast with the slick glass, steel and aluminium used elsewhere. Composite timber decking is used extensively around the building terraces and to the soffits of the first floor and roof overhangs. The building, at roof level, is surrounded by a wide aluminium 'eyelid' feature for additional shading and to create the impression of a very straight, thin roof overhang.

The articulation is created by generally setting back the ground and top floor level glazing from the building line, and accentuating the middle floors. A layered effect is created by extending the cladding to these two floors above and below the floor levels respectively, giving vertical pro-

portions to what is otherwise a horizontally linear approach. The combined effect of this is not only a finely balanced façade but also the integrated provision of shading to the bottom floor and a balustrade to the top floor.

Due to the Centurion 45° street grid relative to north, the triangular corner of the building is extensively shaded. To the north west, this shading







takes the form of larger vertical fins made up of steel framed aluminium louvres, while the north eastern side is shaded with a large rusted metal screen made up of vertical flat fins of varying depth and thickness. This creates a dramatic effect externally as the view to the building opens up as one moves past the building along Heuvel Avenue. From inside, one senses both privacy and transparency depending on the viewpoint.

Internally, the common parts of the building are designed to be modern but warm and comfortable, with natural graphic themes and accent lighting providing focal elements. The office space is uncluttered and light, with feature pause areas on the 'bridges' over the atria. Roof level landscaped entertainment spaces complete the end user experience of each building.



The Boogertman + Associates team included Andre Wright, Lood Welgemoed, Anushka de Bruyn, Gisela Patlansky (Interiors) and Ilsé van der Merwe (Interiors).

#### INTERIOR DESIGN

The Interior design proposal for the client PPS by Boogertman + Partners Interior Design stemmed from the concept of Biophyllia.

Biophilic design incorporates the idea of biophilia - a human affiliation to nature - into building design. Common biophilic designs include features that allow for the entry of diffuse sunlight, opportunities for contact with nature, use of passive natural ventilation, the use of local natural materials, and views of the outdoors from the interior of the building.

Biophilic elements can be integrated in the design of the building itself, the landscaping of the site and the design of the interior. This is often accomplished by:

- Increasing the amount of natural daylight entering a building through windows and skylights. The large atrium space allows natural daylight to filter through all the floors
- Adding indoor vegetation by including small gardens, potted plants, or planted walls. Plants are incorporated into open offices, pause areas, reception, meeting rooms. Plants encourage wellness and provide oxygen.
- Planning for outdoor green space, including gardens, grassy areas, and trees. A rooftop garden & social/braai area
- Using nature in murals and pictures. Graphic decals of indigenous trees were hand sketched and then printed onto decals and applied onto frameless glass. These graphics grow and

PPS CENTURION SQUARE



creep throughout the office, giving it an 'alive' feeling. The multi-volume atrium has an ivy graphic that creeps all the way from the ground to 4th floor.

- Using natural materials in the interior and exterior. All materials, including natural materials, are sustainable and comply with the Green Building Council of SA guidelines.

#### DEVELOPMENT MANAGERS' COMMENT

The initial concept was drawn up on a serviette at a restaurant meeting held in January 2013 between Gavin Rogaly (PPS), Derek Wheals (Kale Developments) and Andre Wright (Boogertman). From this initial serviette evolved the 5 star green rated, P grade building now known as PPS Centurion Square.



PPS CENTURION SQUARE



The concept was developed into a baseline document which PPS considered and signed off in October 2013. Earthworks commenced immediately with major challenges regarding adverse dolomitic founding conditions being overcome by a team of engineers working with the Council of Geoscience. "More concrete and reinforcement was cast in the foundations than the entire six level structure," says Derek Wheals.

Fast track design development and construction of the main structure ensued, including tenant specific interior design and installation. The first tenants, PMSA, moved into the building in October 2015.

A 5 star green rating was designed for and achieved, making this the first 5 star green rated P grade office block to grace the Centurion skyline.



429





# 1 DISCOVERY PLACE

## 1 DISCOVERY PLACE

Sandton

### DEVELOPERS

Growthpoint Properties  
Zenprop Property Holdings

### PROJECT MANAGER

Morta Project Management

### ARCHITECT

Boogertman + Partners

### URBAN DESIGN

studioMAS Architecture & Urban Design

### INTERIOR ARCHITECT

Paragon Interface

### QUANTITY SURVEYOR

Rider Levett Bucknall

### CIVIL & FAÇADE ENGINEER

Pure Consulting

### STRUCTURAL ENGINEER

Sotiralis Consulting Engineers

### ELECTRICAL ENGINEERS

Claassen Auret Inc; Consciuis

### MECHANICAL ENGINEER

Zutari

### WET SERVICES

Sutherland

### FIRE ENGINEER

TWCE

### TRAFFIC ENGINEER

Kantey & Templar

### ACOUSTIC ENGINEER

SRL South Africa

### HEALTH & SAFETY

Comprac Holdings

### LIFT CONSULTANT

Solutions for Elevating

### KITCHEN CONSULTANT

KDH Catering Design Concepts

### COMMISSIONING AGENT

Shared Energy Management

### LANDSCAPE ARCHITECT

African Environmental Design

### MAIN CONTRACTORS

Tiber Construction; WBHO Construction

### TENANT APPOINTMENTS

Rep: Baseline Project Management

Quantity Surveyor: MLC

Electrical Engineer: MWKE

Mechanical Engineer: WSP in Africa

1 Discovery Place in Sandton is the new home of South African medical and financial services giant, Discovery. Known for its innovative approach to its product offerings and focus on wellbeing, its new Head Office encompasses those key tenets.

### Client Brief

Developed jointly by Growthpoint Properties and Zenprop Property Holdings, there were two key factors within Discovery's brief.

The first was to create an architectural statement that captured the essence and core values of the Discovery brand that it could be identified with going forward. Following on from the first was the aim to improve efficiencies in the day to day working of the company. Staff were spread over four disjointed buildings around Discovery's original 155 West Street offices and this was starting to impact on the way that they did business. Discovery required a new building designed with their way of working in mind and offering flexibility for future growth and operational changes.

### Concept

The Discovery building was conceived from the inside out by architects Boogertman + Partners. At the core of its design concept is the creation of a rich internal environment within and around which the Discovery community can thrive. At all times the archi-



ARTICLE PHOTOGRAPHY  
Infrastructurephotos  
Natural Photography  
Courtesy of Discovery  
Courtesy of Boogertman + Partners





tectural design considerations are centred around the human experience of the space. This concept resolved itself into two large, sun filled internal atria around which the open floor plates were arranged. The atria are enclosed by 2,800m<sup>2</sup> of glazed roof, with all pause areas and agile spaces opening into them. Connecting these atria to one another is a central concourse, within which a stack of escalators links double volume bridges that stitch the floorplates together. The concourse

space was conceived as a 'grand central station', a literal and figurative interchange between the company and its clients. The roof of the building is a landscaped retreat, accessible to all employees, where the philosophy of an holistic approach to health, an integral part of the company's core values, is physically expressed.

The building's form is defined by an external 'camisole', a projecting portion of the façade articulated by white powder coated vertical



1 DISCOVERY PLACE

aluminium fins. The sensuous shape in plan, combined with the undulating vertical expression, creates a simple, monolithic statement that gives the building a unique and powerful visual signature.

#### Zones

The building is vertically divided into zones of access. The ground floor is open to the public and people are actively encouraged to come to the building for lunch or coffee. It was very important to both Discovery and the developers that the ground floor was easily accessible; thus the north entrance sits almost level with the Katherine/ Rivonia intersection, meaning people can easily walk into and out of the building and connect into the broader Sandton Central area on foot. Ground floor has two restaurants, a coffee shop, retail outlets, the first Discovery Bank branch, the Wellness Centre where clients can have their Vitality assessments done, a Woolworths and auditoriums for events and announcements. The ground floor opens into the atrium spaces, connecting visitors to the working floors above visually and spatially.

The first floor is for training and meeting rooms. The second floor to seventh floors have the working office spaces that are not accessible to the public unless by appointment. This is the core of the company. Each floor plate has two large pause/break away areas opening into the atrium spaces, as well as agile spaces that allow for different ways of working and interacting.

There are a number of meeting rooms per floor for departments and employees to meet and interact with one another. These are concentrated in the core to allow for maximum flexibility on the floor plates. Including Phase 2, each floor plate measures over 10,000m<sup>2</sup>. It was very important for Discovery to have as large a floor plate as possible to maximise efficient interaction and planning of their various departments.

Level 8 is where the gym is located as well as access to the landscaped roof which extends up to level 9.

#### Architectural Challenges

A key feature of the building is the floating 'nose' of the West Tower which projects over the Katherine/ Rivonia intersection. To make a statement that fitted with the scale of the building, the architects needed to cantilever 17.5m over six floors. This posed a significant structural challenge that was eventually solved with the introduction of three massive concrete beams that project over the length of the cantilever. The floors were then suspended from these beams on steel, concrete filled, columns.

The external façade was also a tricky issue to resolve. In Boogertman + Partners' pitch they had presented a building with an undulating white camisole over dark blue glazing. Initially they had thought that the façade would be a ventilated façade with the external skin receiving a fritted pattern to create the 'solid' white look. After being awarded the project, and researching and



1 DISCOVERY PLACE



resolving this façade, they came to the realisation that the frit would be very visually obstructive from within the building, impacting on the fantastic views from the site. It also became apparent that the ventilated façade was not the right solution for the building economically, however the team all agreed that the expressive undulating camisole was a key feature of the building's exterior form. As a result the floorplate was extended to fill the camisole space, thereby making what was previously a void in the ventilated façade now useable floor area.

To solve the issue of the façade treatment a full scale mock up about 7m high and 5m long was built and various shortlisted glass types were installed that met both aesthetic and sustainable criteria. The architects tried to create the contrast between the camisole and the rest of the façade with different colours of glass, but the visual punch required was not being obtained.

This was eventually solved by introducing the 200mm deep white aluminium fins onto each mullion on the camisole. This allowed the creation of the visual contrast without compromising the

internal views. It also gave the building a uniquely dynamic character as it changes depending on the angle you approach it from as well as the time of day.

Another challenge was the large atrium roofs. The architects wanted these to provide as much light as possible which meant the engineering of a bespoke support solution that was visually unobstructive, but structurally stable. They challenged themselves further by making the glazed roofs an inverted 'Pringle chip' shape that echoed the swoop of the façade camisole. The solution from the façade engineers is an elegant tension truss lattice that supports both the weight of the glazing as well as resisting the up forces created by the movement of air over the top of the glazed panels.

The architects were challenged with how to move people vertically through the space in a way that allowed them to enjoy the scale of the atriums and concourse without being intimidated by them. They needed to relate the human scale back to the building scale. This was achieved by creating double volume landings which moderate the larger 7 or 8 level spaces. This means you can look out to the larger volume from the relative 'security' of the smaller volume space. This spatial modulation was also used in the pause areas and some of the agile spaces and has worked very well. It was a key factor in the human centred design approach as you can't create grand architectural statements that people don't feel comfortable in.

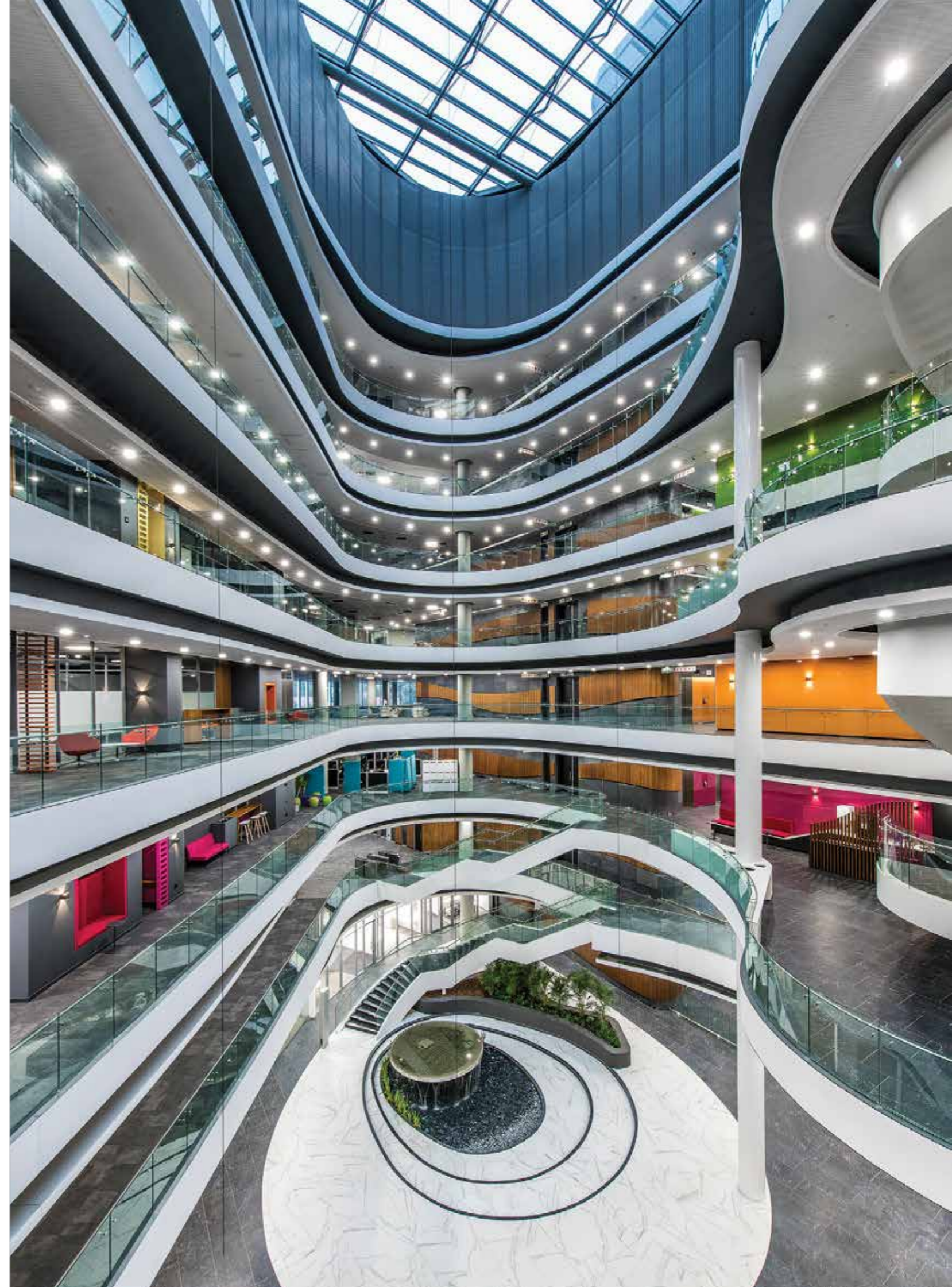
#### The Façade

Pure's Neil MacLeod gave his thoughts on the façade: "The main façades are continuously curving inner and outer glass planes forming a draped 'camisole' around the building. They are aluminium framed with high performance double glazing. Some people say the glass is a bit on the dark side but that is because it was selected after intense debate and analysis to favour occupant comfort near to the façades over clearer options.

The canopies are single glazed with thick sandblasted glass for shading and to hide the dirt when they have not cleaned the glass!

The roof lights are very special and were not easy. Tears and blood were shed metaphorically and tempers were lost not so metaphorically over some of the issues sadly. But as the saying goes, we chose to do this because it is not easy. Something very special was required and generally that means something hard to do.

Take the structure first. If you look at the steel you will see a repetition of structural form. We







have used double tension tied down prestressed bar trusses at medium scale and then at a huge scale to span 35m with no bracing in the plane of the glass.

The shape of the roof lights are tilted cylinders sloping up from the centre and having an oval shape when viewed from above. The glass

is SIGU's using thin Fritted Fully Toughened Glass in the outer. This outer is designed for hail resistance on the basis it breaks the hail and not the other way around! The inner glass is a thicker laminated glass that supports the outer glass on a bubble of insulating gas inside the SIGU's."



#### Sustainable Elements

The building has achieved 5 star Green Star design rating, and the Green Star Interiors V1 As As-Built rating is in the process of being applied for. Apart from the HVAC and plumbing strategies mentioned above, indigenous planting has been used throughout to reduce water usage. Cyclist and jogging change facilities and showers are provided. All lights are LED. Internal blinds are automated and controlled by a suntracking system that adjusts the blinds angle as the sun moves across the sky to minimise glare and maximise light into the floor plates.

#### Interior Architecture & Design

One of the main factors pertinent to the interiors of 1 Discovery Place is that the design was customised very specifically around the Discovery's requirements. The developers chose to include Discovery throughout the design process to ensure the building was tailored for them. On that basis, Interior Architects and Designers, Paragon Interface, then proceeded to shape the interior space towards embodying Discovery as a company and their vision.

With a project of this nature, everything was very bespoke. In achieving that, the project team had to work cohesively on every aspect of the project; meeting on site and continually liaising.

#### Atria

Atriums formed one of the main drivers behind the design context. The central atrium design was led very much by the idea of the concourse. Working with Boogertman + Partners and Discovery, there

was an understanding that they wanted the building to be very active; they wanted to see people, activities & life happening, This was then translated into public spaces, active collaboration hubs, break out spaces, pause areas and agile workspaces. Initially the left and right atriums were very structured and the same all the way up. As







they developed, the atrium designs became more curvilinear and spoke more to the architectural design of the building.

There are two conceptual ideas of a CALM atrium and an ACTIVE atrium. A visitor will get the feeling that the one atrium is far more peaceful; there is a lot more planting and it is more intimate, whereas in the larger atrium, you really feel the level of activity, as it opens up more towards you.

As you walk through the concourse, you can see how Discovery's brand identity has been populated in that space with box-like 'pods' added onto the sides of the concourse. This is not only to enhance the aesthetic, but also showcases Discovery's branding. They also serve the functional aspect of making breakout



spaces in front of the bathroom entrances on varying levels. That, combined with the integration of ceiling details, colour coded floor levels, the 6-storey high main reception, which also integrates Discovery's colours – really becomes the Discovery overlay within the building and also serves to provide distinctive wayfinding.

#### Circulation

Circulation was a fundamental driver throughout the design intent. When you have so many staff to accommodate on a 12,000m<sup>2</sup> plus floor plate, it is easy to feel lost and overwhelmed. It was important to humanise the scope of the building through the interior architecture and design. Wayfinding and visibility were key to ensuring people knew where they were within the building. This was achieved by seeing the building as a series of spaces you move through, rather than one large space.

The pause areas populate the edges and open out onto the atriums - not only showing activity, but also providing spaces to meet. Along the bottom edges of the concourse, boxes ensure you are not just walking along a passage, but have some break-out areas as you move inwards, which could also serve as multi-function meeting spaces. Within the floorplate itself, 'Walk-and-Talk Walls' that run along from the atrium edges break up corridors so that moving from Point A to Point B there are various active spaces to circulate in.

The design was not only integrated horizontally, but also vertically by connecting the floors together. Eleven coffee shops and meeting rooms alternate between the cores, so people have to walk between the different levels to use the services, which also creates chance interactions between staff that may never meet each other.



Staff wellness is a key aspect of working at Discovery and this was fundamental to the spaces developed. There is not only a gym, but multiple events pertaining to lifestyle aspects. As the brief developed, the designers needed to provide amenities that you would not normally find within a corporate building: there are 11 coffee shops and 4 major coffee brands as well as two restaurants. There are a wide variety of shops, making the day to day life of an employee easier by providing services on site. The number of amenities and benefits integrated within the building matrix transforms it into a space that resembles a city.

#### Materials

In terms of materiality, the design team wanted the building to be very vibrant and quite tactile; fresh and lively. This tied into how they perceived and understood Discovery's corporate identity, and that design intent is followed through by means of the materiality. In the main concourse, the floor tile has movement in its finish which adds to the vibrancy. Using different types and formats of the same material finish created something very nuanced but not overpowering. The floors and ceilings are quite a neutral space, populated by colours from Discovery's corporate identity.

When you look up at the atriums, it is completely different than when looking downwards. The upwards views are really exposed to the architectural language of the building – the curvilinear aesthetic brought through in the ceiling edges, creates contrast between black and white so that unique shapes and forms really stand out.

Looking downwards the view is colourful with each office floor colour coded, using Discovery's

corporate identity as inspiration. Pops of colour add vibrancy and assist in the practical aspect of being easily identifiable from a wayfinding perspective. Within each floor, fabrics, flooring, glazing and vinyls are colour coded to match. The colour coding within each floor ensures a vibrancy that is not overpowering.

#### Conclusion

The project team, client, and developers have all come together to create a building and working environment that not only epitomises Discovery, but is very much a 21st century workspace. The care and attention to staff welfare and comfort makes working at 1 Discovery Place a world class experience.





# WSP KNIGHTSBRIDGE

**WSP KNIGHTSBRIDGE**  
Bryanston, Johannesburg

**DEVELOPER**  
Emira Property Fund

**PROJECT MANAGER**  
Orb Consulting

**ARCHITECT**  
Boogertman + Partners

**QUANTITY SURVEYOR**  
Rider Levett Bucknall

**CIVIL ENGINEER**  
WSP in Africa

**MECHANICAL &  
ELECTRICAL ENGINEER**  
WSP in Africa

**FIRE CONSULTANT**  
WSP in Africa

**GREEN CONSULTANT**  
WSP in Africa

**INTERIOR DESIGNER**  
Boogertman + Partners Interiors

**MAIN CONTRACTOR**  
Archstone International

**PHOTOGRAPHY**  
Graeme Willy

**K**nightsbridge is a redeveloped office park in Bryanston, Johannesburg being developed by Emira Property Fund. Upon completion this prime located office development will boast 29,352m<sup>2</sup> in terms of GLA office space. Located in Sloane Street opposite the Didata Campus, redevelopment commenced in November 2015. Linked to this development has been the upgrading of the intersection of Sloane Street and William Nicol Drive in order to minimise the impact of expected additional traffic feeds in the area, now and into the future.

One of the seven new buildings planned houses the South African headquarters of global multi-disciplinary engineering consultants, WSP in Africa.

## Client Brief

Designed by Boogertman + Partners, the design brief from the client, the Emira Property Fund, was for the phased redevelopment of the previous office complex of two storey office buildings. The previous character of the Knightsbridge Manor development was office buildings within a green park with a large number of fully grown trees. The brief therefore was to ensure that the impact of the increased bulk GLA from ±10,000m<sup>2</sup> to ±30,000m<sup>2</sup> was mitigated by relocating indigenous trees and upgrading the landscaping and planting of endemic plant species.



Knightsbridge is a redeveloped office park in Bryanston, Johannesburg being developed by Emira Property Fund. Upon completion this prime located office development will boast 29,352m<sup>2</sup> in terms of GLA office space







### Masterplan

The masterplan was developed around the relocation of the site entrance and exit from a previous mid-block connection to the upgraded Sloane Street traffic circle. The masterplan layout is focused around the idea of a central urban park with buildings located within a dense urban forest. The Central Park houses a restaurant and conference facility with a tiered garden. Running tracks and outdoor relaxation spaces are provided within the landscaping. The periphery of the office park is densely planted with indigenous trees as well as the salvaged mature trees from the previous Knightsbridge Manor.

### Biophilic Approach

The client endorsed the initial concept of a biophilic approach and reconciliation ecology within the development and as such the team actively sought out methods for implementation, whether it be the relation of the buildings to the landscaped site, 'green' façades, roof top gardens, the peripheral densification of trees or the experience of the external landscape while you are within the building environment. The completed development will have a nature walk / running track around the extent of the site, with outdoor relaxation spaces and gym. The aim is to foster a natural environment that requires minimal



irrigation and low maintenance while increasing the biodiversity of both fauna and flora.

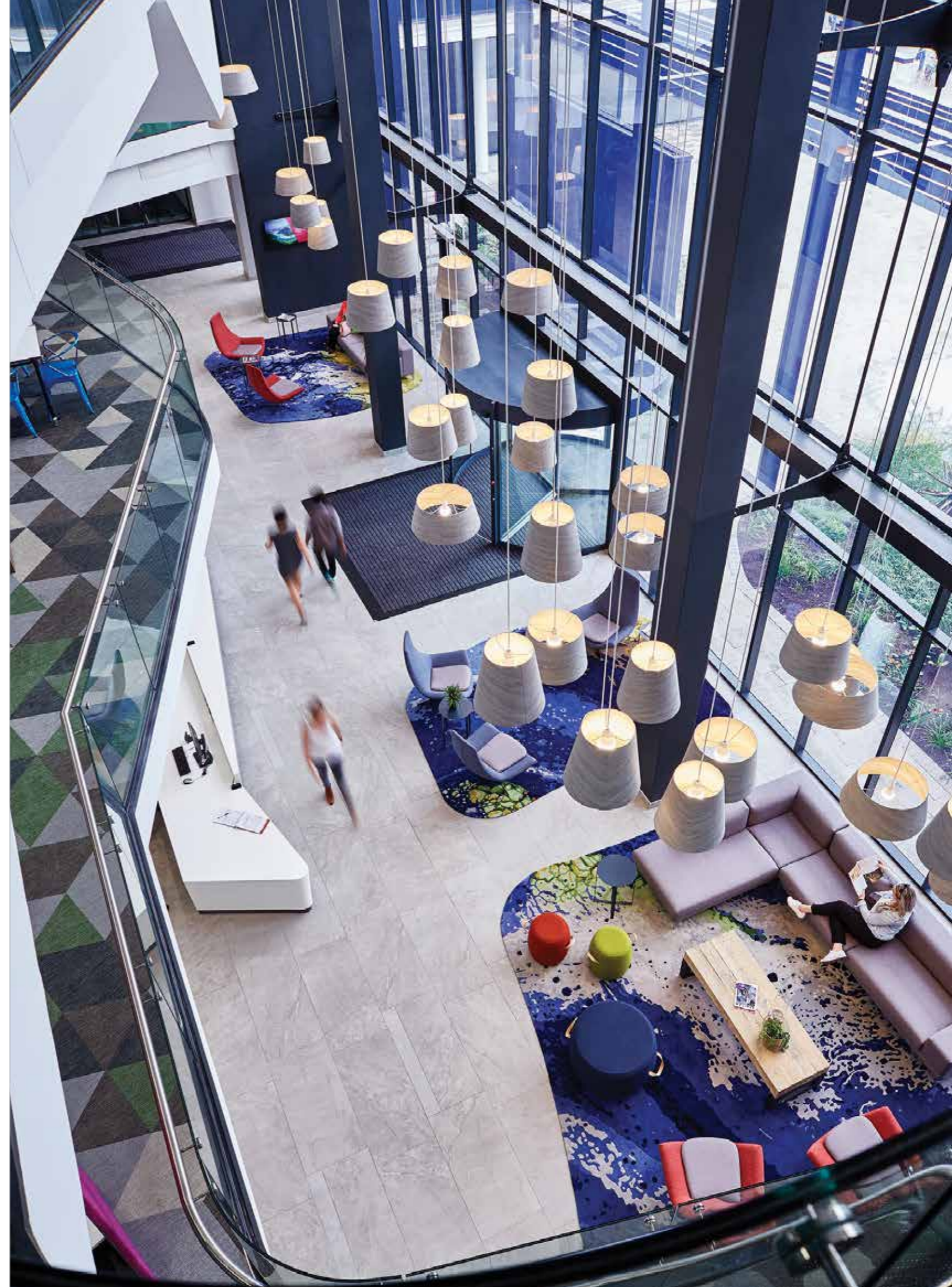
### Design Concept

The brief for the buildings was to develop design resolutions that would allow sub-divisibility during the life-cycle of the buildings to ensure resource conservation by maximising use and future usage. The design is minimalistic while being conscious of the passive design principles in terms of solar exposure, orientation, and daylighting as well as resource efficient active design strategies. Roof gardens allow the user access to great views and a social interaction space.

The Central Park Facility housing the restaurant and conference facility is seen as the heart of the project. Ensuring the successful integration into the sloped landscaping and having the roof of the Central Park building as the fifth elevation was paramount to the design consideration. The landscaping is again tiered to allow users different environments depending on their requirements, while water-features will create a backdrop of white noise within the relaxed atmosphere. The roof of the Central Park Building will be planted with endemic low maintenance grasses to ensure that the surrounding buildings look onto a landscaped area rather than a concrete roof.







### The Site

The site has quite a steep gradient with a fall of 14m over the length. The design of the buildings has to follow the slope and as such it was a challenge to not have basement parking levels dominate the aesthetic. Tiered landscaping was used to minimise the extent of the visible parking level to foster buildings that are part of the landscape. It was also quite challenging to have a contextual street relation as the buildings are separated by a see-through fence. The client acknowledged the importance of street activation or rather street frontage and allowed Building A at the main entrance not to have a fence separation between the sidewalk and the building.

Considered security measures within the ground floor design of Building A had to be implemented to ensure a secure and safe environment while still having the building as part of the sidewalk. The site placement of the buildings in terms of levels as well as creating pockets of planting on suspended slabs tries to increase the landscaped areas to the maximum.

### Façade

The façades comprise masonry cavity walls with Versus Textured Plaster, single and double glazed unitised aluminium façades as well as external horizontal and vertical steel screens for creepers.

### WSP

Building C which houses WSP, is built over 6,300m on a three level basement superstructure for both buildings A and C. The U-shaped building is accessible from the Basement level -1 on the eastern façade

with lobbies fronting onto street level. These lobbies, as well as the cyclist facility were placed at the eastern portion of the basement level to activate the eastern vehicular street. On the ground floor level, entrance into the building is via the landscaped courtyard into a three level atrium. The building was designed with two vertical circulation cores to ensure maximum future flexibility in terms of sub-tenants. The building has 330 parking bays.

As the anchor tenant for the first phase of the redevelopment project, WSP played a pivotal role in the design of not only the company's own new building, but the layout and planning of the precinct. For the construction of their new HQ building, the company provided a full host of design consulting services – across civil, structural, mechanical, electrical and electronic, plumbing, fire and sustainability – and worked closely with the architect, project manager, quantity surveyor and full construction team, which resulted in a better coordinated outcome.

### 3D/Virtual Reality

In the early design phase, WSP used its 3-dimensional (3D) assets to design an immersive, gamified, virtual reality (VR) rendering of the planned redevelopment for the precinct and a detailed rendering for the company's building.

Once the detailed rendering of the new HQ was completed, WSP were able to host 3D coordination sessions. This not only enabled the collective project team to ensure that the design process was done thoroughly, but also to identify any potential problems or snags early on in the design phases - and





take steps to correct these in the 3D environment. This provided a holistic and integrated design complement that truly allowed the full project team to be proactive and collaborate on solutions – and lead to far more coordinated and streamlined construction phases as well.

#### Sustainability

The new WSP building has been awarded a 4-Star Green Star SA Design rating certification from the Green Building Council of South Africa (GBCSA) – and in time WSP will also apply for an ‘Existing Building’ rating, based on the actual performance of the building.

The design of the building is on the cutting edge of modern working environments. Following biophilic design principles, the building offers staff an amazing space to be inspired and work in. WSP’s underlying intent on this project was to prove that it

is possible to have a well-designed, efficient building that is more cost effective to build and maintain than a non-rated building.

#### WSP INTERIORS

##### Workspace Strategy & Re-Branding

This unique tailor-made workspace was developed by Boogertman + Partners Interiors by means of a ‘WSP-specific’ Workspace Strategy. The Workspace Strategy revolves around processes that are people-centred, immersing the employees in the decision making process from the get-go. The Workspace Strategy included company-wide electronic surveys, interviews with a cross section of the company, detailed observations on site and rounds of interactive spaceplanning.

The collected data informed the design. The end result incorporates a wide variety of department specific workspaces, allowing the user to choose



WSP KNIGHTSBRIDGE



the environment most conducive to their own productivity and wellbeing.

As part of the WSP rebranding strategy the company moved away from the traditional closed offices to open plan office space. All members of the company sit together in the open plan areas. These areas are supplemented with a vast array of alternative workspaces.

Many of the furniture items in the new office consist of reused and adapted furniture items. This includes workstations; recycle bins, storage cabinets, soft seating and over 100 table legs.

#### Biophilic Design Approach

In order to inform the department-specific aesthetics and arrangement, the interior designers adopted a biophilic design approach. ‘Biophilic design acknowledges that humans have an instinctive tendency to seek out connections with nature and other living forms.’

With this in mind they created an ecosystem of spaces through the use of a central spine which connects the alternative workspaces and the various departmental zones. This spatial layout encourages movement, socialisation and collaboration which in turn optimises productivity, increases health and wellbeing, while supporting the company’s corporate culture. Facilities such as a Mothers room, multi-faith prayer room, cycle & shower facilities and staff restaurant are provided within the workspace.

Visually the circulation spine is accentuated by means of coloured ceilings and matching coloured carpets. The colours of the circulation spine were selected to reflect nature with its green and turquoise hues. The spine moves through the whole building like a colourful ribbon tying all of the parts together into one unified design.

The journey through the interior ecosystem starts in WSP’s spacious entrance lobby. Aesthetically, the design echo’s natural forms, patterns & textures in various ways. Upon arrival in the lobby one is

greeted by the organically shaped ceiling lines, balustrades and reception desk. These biomorphic forms provide an indirect connection with nature, as they are symbolic references to contoured arrangements that persist in nature.

Behind the reception desk the intricate herringbone timber wall cladding creates a material connection with nature. The carefully designed leaf-patterned decals imbue the space with rich sensory information. This complexity and order is enhanced by clusters of pendants that sway lightly overhead, highlighting airflow within the lobby to mimic nature in the space. The custom organically shaped carpet grounds the furniture in the space. The carpet pattern is derived from an aerial view and hand-made to be one of a kind.

The colours that were selected were used for the various different functional areas. This included the smaller meeting rooms dotted around the building interior. Here the signage that was incorporated was derived from the herringbone texture found in the reception area. The herringbone pattern is representative of the dense repetition of leaves and vegetation in nature. In order to ensure a unified design intent throughout the interior, the herringbone pattern can also be found in various other spaces. Some examples include fixed timber screens, mobile timber screens with white boards and pinboards, and sliding textile screens that create flexible spaces of refuge. The partially obscured views through the slatted herringbone screens create a sense of mystery that entices the user to travel deeper into the environment.

In conclusion, WSP’s office interiors illustrate the successful implementation of a tailor-fit workspace strategy and biophilic design principles. This design approach not only addresses the aesthetics of the interior but also how it can have a positive impact on emotional, cognitive and physical wellbeing of the user. WSP’s new interiors can be seen as a rediscovery of the intuitively obvious.

WSP KNIGHTSBRIDGE



# 96 RIVONIA ROAD

**96 RIVONIA ROAD**  
Sandton, Johannesburg

**CLIENTS**

Investec Property  
CRI Eagle Investments

**ARCHITECT**

Boogertman + Partners

**PROJECT MANAGERS**

SIP Project Managers  
CPD Project Management

**QUANTITY SURVEYOR**

Norval Wentzel Steinberg

**CIVIL & STRUCTURAL ENGINEER**

Pure Consulting

**MECHANICAL ENGINEER**

Adaptive Resource Engineers

**ELECTRICAL & ELECTRONIC ENGINEER**

CKR Consulting Engineers

**WET SERVICES**

CKR Consulting Engineers

**ACOUSTIC ENGINEER**

Linspace

**FIRE CONSULTANT**

Specialised Fire Technology

**LIFT CONSULTANT**

Solutions for Elevating

**HEALTH & SAFETY**

COMPRAC

**TOWN PLANNER**

Tienie Bezuidenhout & Associates

**INTERIOR ARCHITECT & DESIGNER**

Stephen Rich Interiors

**LANDSCAPE ARCHITECT**

AED

**MAIN CONTRACTOR**

Group 5

**PHOTOGRAPHY**

Adam Letch  
Studio88 Photography

While the original concept was in the form of an L-shaped building the final clean form of the box was the winning idea

The new home of anchor tenant, Werksmans Attorneys, is the first building to be developed on the site of the new mixed use precinct in the heart of Sandton known as The Central.

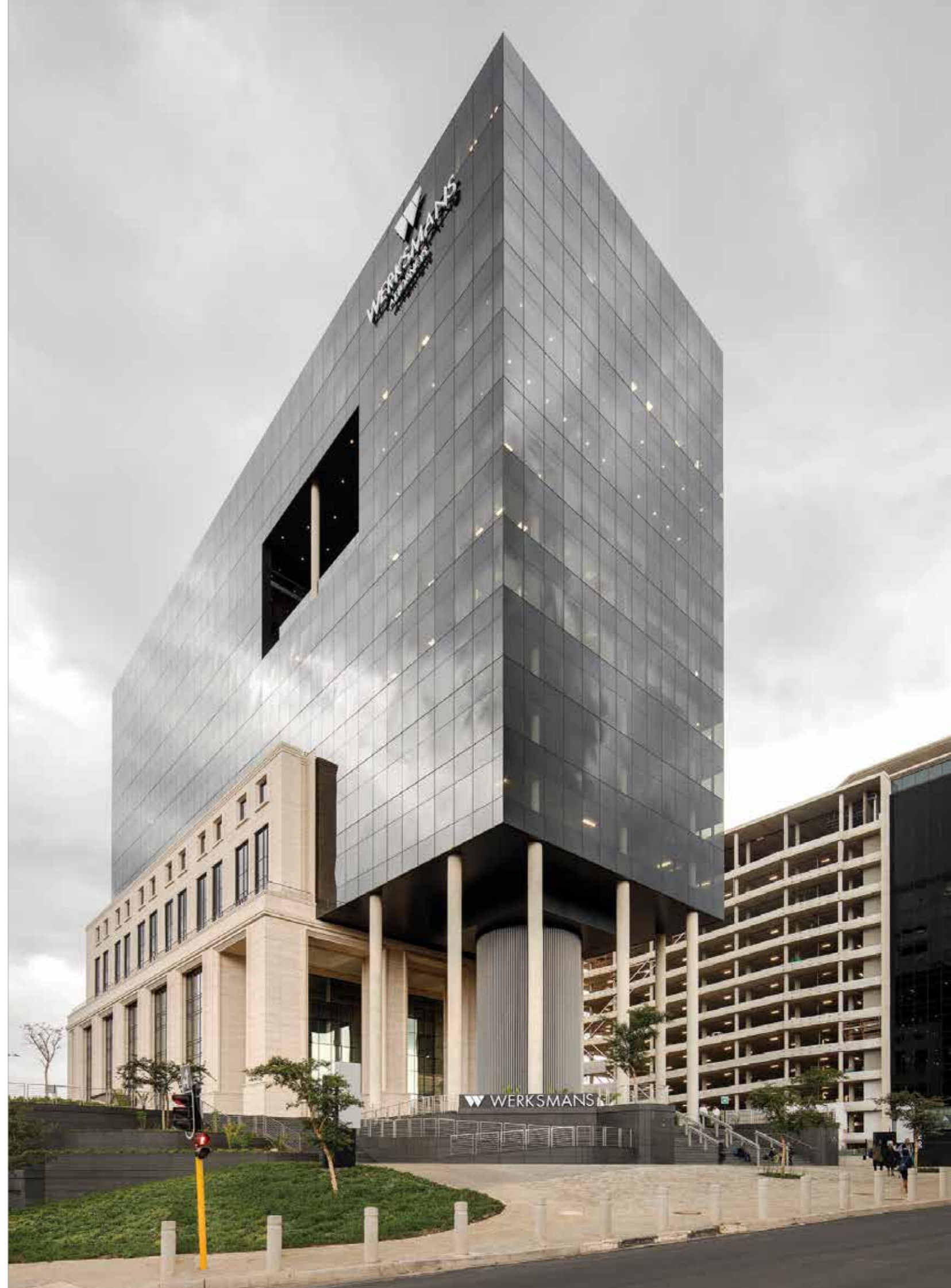
**Background**

Continuing their long standing relationship with Werksmans, Investec Property sought out a high profile address for the development of an iconic building that would house the law firm for many years to come. Identifying a prime location in Sandton adjacent to the Gautrain station, Investec approached the owners of the land, CRI Eagle and embarked on a Joint Venture with them to develop the site into a world class precinct. The Central will eventually include 100,000m<sup>2</sup> of mixed use rights, which will include retail, office, residential and a hotel. Located opposite the Sandton Gautrain station the site is easily accessible and the construction of the massive multi-storey basement will ensure that the precinct has buildings with podiums that are pedestrian friendly and allows for public spaces.

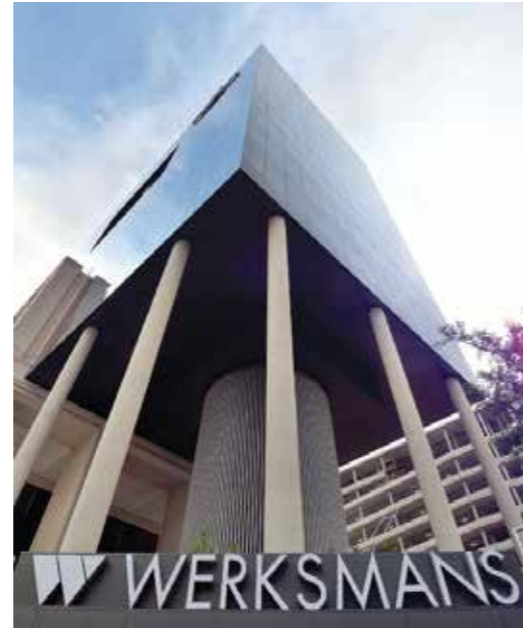
“96 Rivonia Road is the result of a close tenant driven relationship between Investec and Werksmans that has accommodated the firms history and ethos into the design,” says Gavin Bernstein of Investec Property.



96 RIVONIA ROAD







#### Architectural Design Brief

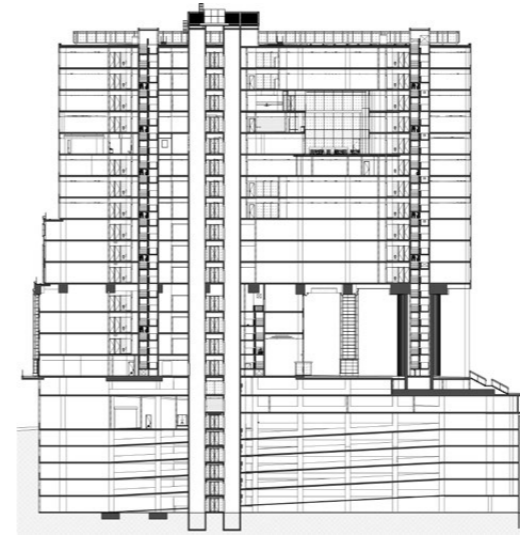
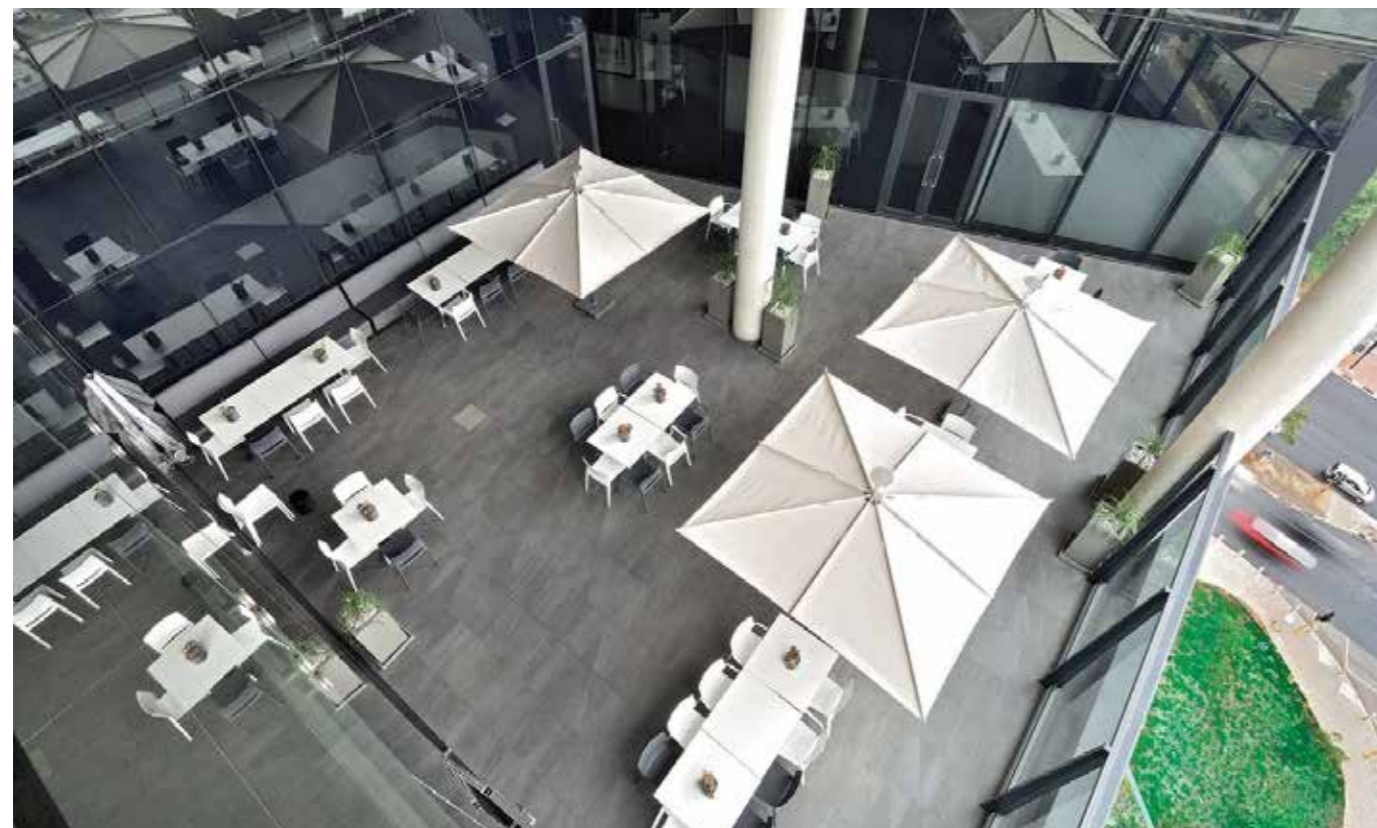
The original client brief was the need for a 20,000m<sup>2</sup> landmark building. Robin Magid of Investec Property adds "Central to the brief by Investec Property was that the building interacts with the precinct."

Once Werksmans, as primary tenant, came on board with their designers – Stephen Rich Interiors, the brief was defined to an envisaged concept presented by Stephen Rich Interiors. Investec Property and Boogertman + Partners

developed the concept based on an understanding of the client's culture & ethos and the design elements presented.

#### The Concept

With Werksmans as the primary tenant in this landmark building in Sandton, the concept for 96 Rivonia Road is derived from the firm's historical and current legal prowess and dominant presence in the legal services marketplace. The stone base of classical form and proportions lays the



foundation of the firm's history which then projects into the future with the modern, clean lines of the black box. Almost as if it is a handshake between the old and the new in a promise to build on the past while striving into the future.

#### Site and Planning

The site orientation presented a challenge in the sense that it is facing North-East. It resulted in a narrow elevation facing Rivonia Road to the North-West. This orientation influences the heat gain in the building which was addressed through the design and selection of glazing and blinds.

The bulk of the rights allocated to the site required the provision of more than 800 parking bays (±30,000m<sup>2</sup> basement parking). The necessary basements were planned and designed to accommodate the required 865 parking bays. The parking and services were provided in eight basement levels, of which the top three project above the natural ground level.

This design was purposefully done to create midblock connecting opportunities for the future developments once they come online and present the levels ready for a super podium and super basement. At the same time, the planning made provision for the development of the podium level which is the ground floor of this fifteen storey building.

The floor plates took the form of a narrow rectangle due to the site shape and orientation. The lift lobby is centered on the floor plate, slightly off to the south, and the two services cores that integrate with the ablution facilities are on the North-West and South-East. The lift lobbies were designed very efficiently and compactly so as not to infringe too much on the narrow footplate of the floors.







The Zimbabwe black granite achieved the dark perception of unobtrusiveness to avoid drawing the attention away from the sandstone and black glass on top.

**Podium Landscaping and Form**

The function of the podium is more than just the entrance to the main tenant lobby. It serves as a pedestrian walkway with access at ground level which will link future buildings to each other and making the entire area fully pedestrianised. As with the highline in New York the whole area

presents itself for seamless access for people and interaction with ground floor retail and other buildings in the precinct. At the same time the pergola provided is a breakaway place for tenants in the building to sit on the benches constructed and enjoy city life from a garden perspective.

**Circular Fire Escape Stair at Werksmans Entrance**

The support structure was turned into a fire escape staircase running from the podium level



up to the fourth floor. The ribbed finish on the sides of the concrete cylinder shaped the upward lines forming a key that ties the glass box down to the podium level.

**Sky Lobby**

The sky lobby created a break in the black box. The opening on the North East and the South West gives the impression of the opening being punched through the building even though the three levels cross through this space. The triple volume opening runs from levels 10 to 12. The

space functions as the entertainment deck for the Werksmans staff and clients.

**Challenges**

The original idea was not to have any support under the glass box but have it cantilevered over the entrance of Werksmans. This however proved to be too expensive and the concrete structure was brought in to reduce cost. A glass box will always pose a thermal comfort challenge, but it was addressed effectively and efficiently by the engineers.







#### Materials

The project had used approximately 21,691m<sup>3</sup> of concrete, 9,260m<sup>2</sup> of double glazed panels, and 2,868m<sup>2</sup> of Sandstone cladding which complements the three primary materials in bringing this building into being.

#### HVAC and Plumbing

The services were divided into two zones: Emergency services in basement level 2 and the building services on the roof.

All HVAC plants were installed on the roof with water reticulation running up the building to the roof and then down. Due to its gravitational nature drainage was established in the service ducts behind the toilet cores. Vertical reticulation

of HVAC Ducts and chiller pipes were also positioned around the same core areas feeding fan-coil units in the ceiling voids of the Werksmans office spaces.

#### Sustainable Elements

The design has taken all the SANS10400, Part X and XA into consideration. The lighting design was done with as low as possible W/m<sup>2</sup> and water saving measures were implemented. A glass box design in any terms presents a challenge concerning the thermal behavior of the building, but the team managed to successfully resolve this through the selection of the type of glazing and the specific blind preferences to control glare and heat gain through the façades.



96 RIVONIA ROAD



#### Interiors

Designed by Stephen Rich Interiors, the Werksmans offices have their own dedicated entrance on the ground floor where the firms extensive collection of original art by South African artist is showcased in an art gallery style environment. The plan is for revolving art exhibitions to be held in this space from time to time.

In keeping with the trend towards clean and simple interiors, the colour palette of the interiors is monochromatic with black and white, charcoals and grey as its starting point. The paneling and woodwork is stained in a champagne gold tone. The use of art throughout the offices and common areas adds colour and vibrancy to the palette.

#### Space Planning

Due to the legal and confidential nature of its business, the Werksmans office layout is made up mainly of more traditional cellular office space as opposed to the current trend for open plan work spaces. The floorplate was specifically designed to accommodate a 70/30 cellular to open plan office ratio.

The space is very much a 'live-in' workspace for the staff as well as accommodating visiting clients for meetings and lunches, thereby keeping business in-house and encouraging a strong culture of social interaction. An industrial kitchen is able to accommodate all catering requirements from staff and client lunches to large functions. The numerous common and meeting areas include lounges, bars, conference rooms, canteens and dining facilities. The auditorium accommodates approximately 200 people.

96 RIVONIA ROAD

#### Interior Finishes

The overall atmosphere of the space is residential rather than commercial. Although all fabrics used are synthetics specifically manufactured for commercial use, these fabrics replicate wool, silks or linens that would be more often used in a residential environment. Hard surfaces incorporate different colour glass as well as metal work in a variety of finishes from brushed to polished and powder coated.

#### Conclusion

96 Rivonia Road stands as an iconic anchor building for the rest of The Central precinct and sets the standard for what is a world class addition to the Sandton CBD.





# ABSA RIDGESIDE

**ABSA RIDGESIDE**  
Ridgeside Office Park, uMhlanga

**CLIENT**  
Growthpoint Properties

**PROJECT MANAGER &  
PRINCIPAL AGENT**  
Key Projects

**ARCHITECT**  
Elphick Proome Architects

**QUANTITY SURVEYOR**  
FWJK Quantity Surveyors

**CIVIL & STRUCTURAL ENGINEER**  
Escongweni BPH Engineers

**MECHANICAL ENGINEER**  
Spoomaker & Partners

**ELECTRICAL, FIRE & WET SERVICES**  
AECOM

**SUSTAINABLE BUILDING  
CONSULTANT**  
AECOM

**LANDSCAPE ARCHITECT**  
Land Art Studios

**INTERIOR DESIGNER**  
Boogertman + Partners

**MAIN CONTRACTOR**  
WBHO Construction

**PHOTOGRAPHY**  
Karl Beath

In 2006 ABSA undertook a major refurbishment of an existing building they acquired in Durban's CBD. EPA designed this project which involved a makeover of the somewhat nondescript 1958 mid-city office block, the addition of a 14 storey atrium and 300 bay multi-storey parking garage. A distinctive element in this building which differentiates it in the urban grain is a glass corner tower, foiled by a steel skeleton and capped with a large disc overhanging into the street space. This addition was created to capture harbour views and provide a corner landmark relating to civic buildings across the city square. 10 years later, ABSA outgrew this building and saw the need to consolidate this facility and a number of satellite offices in the city and suburbs into a single office building.

## Brief

Having procured a site in uMhlanga's Ridgeside Office Park and after a short bid process, Growthpoint were selected to deliver a new office building for ABSA on a turnkey basis. This methodology was successfully deployed by Growthpoint in the development of a new Head Office for Illovo in the same precinct and the core professional team on this project was then engaged to design and deliver the new ABSA Regional Head Office. Stringent design guidelines and precinct controls govern this development environment and with this framework in place, the team undertook a series of design iterations and options to derive an efficient and impactful corporate office building.

Over the decade since the inner-city vertical office solution was completed, ABSA's attitude to both the work environment and operational methodologies shifted considerably, notably from a conservative 'cellular office' mindset to an open, flexible approach to space-planning promoting the integration of a broad range of staff facilities. Contrasting the narrow floor plate and verticality of the city building, ABSA directed the new requirement to accommodate up to 700 people over a maximum of two deep office floor plates. This shift generated a significantly different design model which has precipitated a powerful presence and landmark in the office park.

## EAST ELEVATION







**Solution**

The selected site offers substantial visual exposure to a main arterial on the west and to the office park on the east and elevation promotes excellent views to the Indian Ocean and to Durban's CBD. A consistent slope longitudinally across the site and precinct height controls generated a solution which raises the offices to the highest possible elevation, through the creation of a structured parking plinth. This arrangement creates a bold presence in its context and to mask the parking podium on the office park interface, a five storey reception atrium engages the mass

of the building on the east. This grand gesture anchors the building and delivers a captivating street interface which is accessed via a cascading, partially landscaped staircase.

The alignment of the atrium and its corner portico addresses an acutely angled approach and presents the defining architectural characteristic of the offices. The office floor plates connect to the atrium at its uppermost levels with two cantilevered linear glazed client meeting suite bays, animating the solid internal façade, while the lift lobbies engage the space through timber screens at all floor levels. The 35m deep floor plates are linked with two



roof-lit circular atria with helix feature stairs and these serve to connect the levels and introduce light mid floor-plate. A simple planning and sectional strategy has in this way, delivered a balanced form and arresting outcome on its site and in its peri-urban context.

**Façades**

By virtue of significantly varied site interfaces, each elevation is designed to directly address

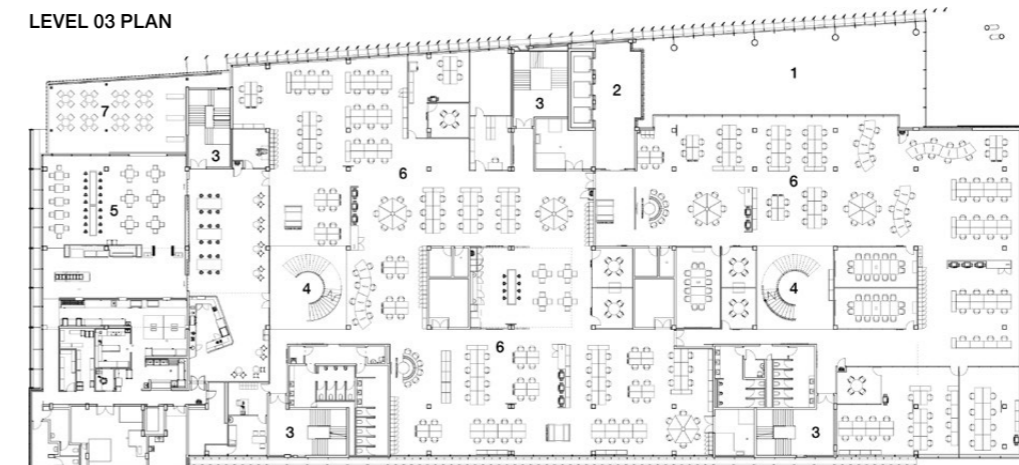
both solar orientation and physical condition. A filter solution is deployed as the basis of the façade strategy with an exoskeleton of shaped louvres, creating a mask of various treatments in response to solar exposure and internal functionality. These deliver a vertical filter on the east and west, horizontal on the north and are absent on the south to promote a slick, longitudinal projecting glazed bay.

**SECTION**

- 1 Richefond Circle
- 2 M41
- 3 Atrium
- 4 Office Space
- 5 Feature Stair
- 6 Basement Parking
- 7 Services



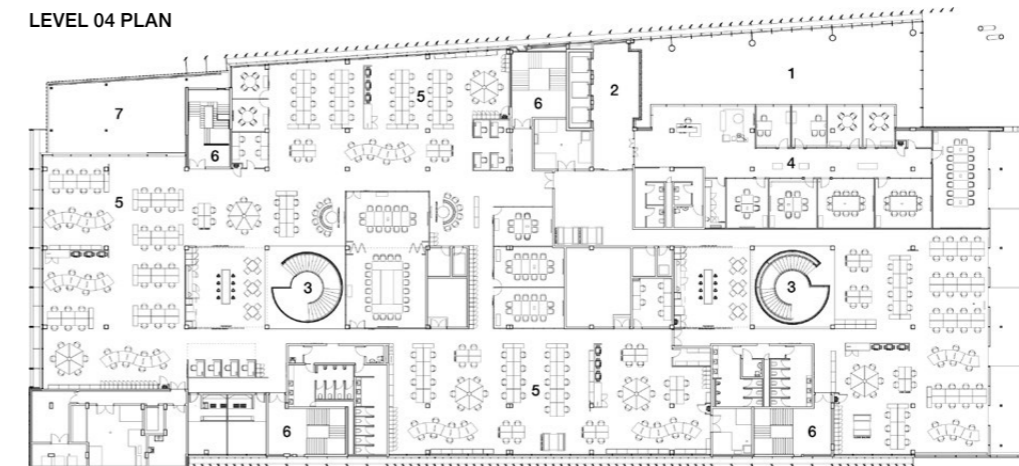
**LEVEL 03 PLAN**



**LEVEL 03 PLAN**

- 1 Atrium Void
- 2 Lift Lobby
- 3 Fire Escape Stair
- 4 Feature Stair
- 5 Cafeteria
- 6 Office Space
- 7 Balcony

**LEVEL 04 PLAN**



**LEVEL 04 PLAN**

- 1 Atrium Void
- 2 Lift Lobby
- 3 Feature Stair
- 4 Client Suite Offices
- 5 Office Space
- 6 Fire Escape Stair
- 7 Balcony







The extensive curtain wall enveloping the atrium enjoys a veiled quality to the east, but this dematerialises on the south to announce entrance and promote focussed ocean views. External verandas on the north east corner and south edge capitalise on sea views and connectivity to the office park landscaping, being expressed as subtractive elements in the overall form and animating the building.

The entire structured parking podium is clad in vertical tubular screens designed to reduce

the scale of this substantial element, promote natural ventilation and simultaneously integrate with the office component above. Complementing the layered façade is a continuous over-sailing roof which is dematerialised by a broad, visually light, louvred rim to deal with the north sun. The overall impact of this veiled approach is thus one which derives from applying simple and effective screening devices over a relatively ordinary and economical inner skin. The exterior is largely rendered in silvers and greys with a charcoal base connecting the elevated offices to the ground, thus yielding a limited material palette and somewhat understated composition.

#### Interiors

The public interface areas were designed by EPA and novospace while the space planning and corporate interior design was undertaken by Boogertman + Partners. A proportional quality of the reception atrium is dominated by its height and emphasised with the strong verticality of the external louvres, timber lift lobby screen and a bold steel sculpture. Neutral greys applied to floors and walls is offset with the richness of Walnut joinery, while the off-shutter concrete soffit used externally extends into this space. ABSA's corporate red is used sparingly internally and this serves to retain a quiet interior quality to the reception atrium. In the office spaces, the corporate standard, created by Boogertman + Partners, is deployed throughout with focus applied to the client wealth area, canteen, office pause and meeting areas.

#### Outcome

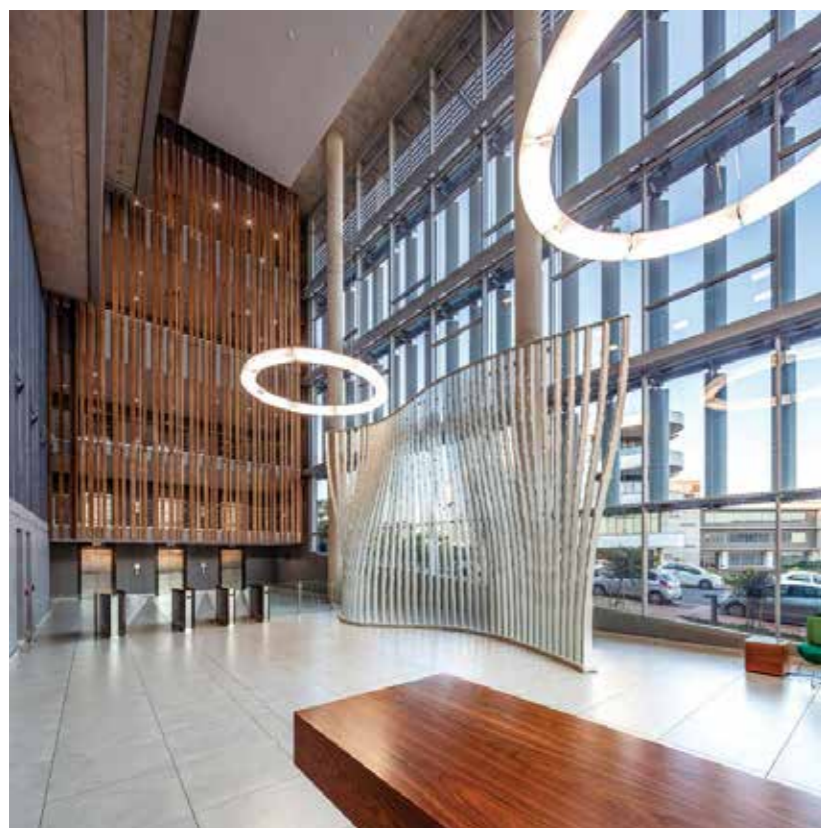
Set in its office park environment, carefully designed indigenous landscaping to the entrance,



verges and parking areas will meld the office by ailing into its context. This foils a building which enjoys an overt simplicity, belying its planning and technical complexities.

Designed to accept a significant long term sustainability programme of a substantial roof-top PV array and other installations, the fundamental design approach delivers a positive response to all green initiatives. In terms of grading, this office building has achieved a four star design and as-built Greenstar rating. The passive solar

control strategy and other 'grassroots' initiatives, have contributed meaningfully to achieving this outcome. In conclusion, the architectural agenda and limited procurement budget through the turnkey process, effectively drove a simple plan form, practical envelope and conventional construction methodology, facilitating a project which was built well within budget and delivered on time. Ultimately, it is considered that the ABSA Regional Head Office offers a significant contribution to the Ridgeside environment.





# THE MAIN STRAIGHT

**THE MAIN STRAIGHT**  
Bryanston

**DEVELOPERS**  
RPP Developments  
Enigma Property

**PROJECT MANAGER**  
CPD Project Management

**ARCHITECT**  
Boogertman + Partners

**QUANTITY SURVEYOR**  
Rider Levett Bucknall

**TOWN PLANNER**  
Boston Associates

**CIVIL ENGINEER**  
DMC Consulting Engineers

**STRUCTURAL & WET SERVICES**  
Sutherland

**ELECTRICAL ENGINEER**  
Aftek Consulting Engineers

**FIRE & SAFETY CONSULTANT**  
Specialised Fire Technology

**HVAC CONSULTANT**  
Climatron Projects

**GREEN BUILDING CONSULTANT**  
Solid Green Consulting

**ENVIRONMENTAL CONSULTANT**  
Seaton Thomson & Associates

**SAFETY CONSULTANT**  
Comprac Holdings

**MAIN CONTRACTOR**  
Iguana Projects

**PHOTOGRAPHY**  
Nic Baleta  
Rikki Hibbert (Rain Interior Photos)

The Main Straight is a premium grade commercial office park development with a contemporary look and feel, illustrating that, regardless of the substantial office space vacancies experienced in the current economic climate, the best product in a prime location and at the right price will attract blue chip and international tenants.

## DEVELOPMENT BACKGROUND

The Main Straight took some 10 years to evolve from residential homes to the leading premium grade office development in Bryanston. The consortium of Enigma Property, RPP Developments and the Rezek brothers (Peter and Anthony), went through a lengthy and complicated process of securing and rezoning five stands to make the 11,200m<sup>2</sup> development possible. Boogertman + Partners were on board from conception and were inspirational in creating modern, energy efficient and striking designs.

Having always been a popular decentralised office node, the Bryanston commercial node became even more sought after with the completion of the Nicol Way Shopping Centre and amenities such as the new Virgin Active gym. With many executives residing in the area, the need for more premium grade, modern and energy efficient office space increased.



Five individual buildings were developed in two phases, totalling 11,200m<sup>2</sup> of rentable area







**Brief**

The developers' brief to the architects was to create an iconic and contemporary premium grade office park. Pursuing single tenants for each building, the idea was to allow some design freedom for each building to have an individual look and character, yet still within the overall design parameters.

Due to the unique topography of the site, a shared parking basement could be designed resulting in an offering of 6 bays per 100 m<sup>2</sup> of rentable area.

Five individual buildings were developed in two phases, totalling 11,200m<sup>2</sup> of rentable area. Four of the five buildings are occupied by single tenants. The focus of this article is the recently completed Phase 2, comprising of the last three buildings (C, D and E).

The central building, Block C, is occupied by B+P and acts as a show piece for the development. The mix of tenants has ensured that The Main Straight has become one South Africa's premium media hubs and has sparked the rejuvenation of the Bryanston business



node, which has subsequently undergone a major transformation.

**Planning and Design Process**

Architects are continually confronted with restrictions, topography and challenges that guide their architectural response to the client brief. The development of 5 Buildings over a phased period for The Main Straight was no different. The brief called for re-development of 5 large residential stands of which the middle stand became available last. Master planning

of the park and the 'super' basement had to accommodate this challenge.

In terms of the phasing, the last stand for Block C, with B+P Architects as the tenant, became available before the final 2 buildings, Blocks D and E, which suited the continuation of the construction methodology and linked basement structures, more than it suited the town planning and approval processes.

The timing of B+P's lease expiry at their current premises and the opportunity for development of new bespoke office space coincided as archi-







BUILDING C - FIRST FLOOR

tect and possible tenants within Phase 2 of the development, and as such, the pressure was on to design and execute in record time.

The B+P 'new office design group' rallied together to design a bespoke, purposeful space that reflected their culture and working ethos and literally designed the building from the inside outward.

The interior workings of creative office space and culture of collaboration and participation guided the design processes and informed the spatial planning. The outer 'skin' enveloping the spaces followed suit. There is a distinct cohesion between served and serviced space, a natural flow of spaces into one another and a measure of flexibility not previously achieved.

As for the remaining two buildings, the brief followed the Phase 1 solution of smaller footprint floor plates over 3 levels. The East and West façades again were designed in response to the solar orientation being more solid, with more permeability to the north, where balconies and terraces link to the internal public spaces.

With a stepped super-basement structure, on-grade-parking basement access was achieved and the building podium was lifted to afford the upper office levels clear, unobstructed views and exposure towards the north.

Each office building also has access to some private green space along the western boundary, in addition to various open, enclosed or covered patio areas. A central core area allows for sub-divisible floor plates for possible multi tenancy.

#### HVAC

The VRV system allows for effective zonal control in the building catering for simultane-

ous heating and cooling within the different zones based on desired internal conditions. Each floor is fitted with a separate VRF system which allows for relative ease in accommodating future office 'churn'.

Block C has a slightly different application for the first floor open plan area – this space is served by two Hybrid Roof Top units that are connected to VRF Heat Pump condensers. The rooftop is also fitted with an economiser allowing full fresh introduction when outdoor ambient conditions allow.

Block E has been fitted with a central controller that caters for temperature, time scheduling and many other value add features.

Fresh air is introduced into the buildings to comply with SANS 10400 Part 0. Air is introduced into the space via either hard connections or discharge to the rear of the ducted units in exposed areas. Balancing dampers ensure the correct amount of air is delivered to comply with regulations.

#### BLOCK C – BOOGERTMAN + PARTNERS Architectural Features

For Block C the façades facing north and south are near completely permeable with visibly linked large glazed expanses. The markedly more solid, east and west façades offer protection against solar heat gain and so does a finely meshed shading structure on the northern open terrace façade.

Double glazing to lower level, western façade glass offers occupancy comfort to meeting rooms and access to a Green Belt. Corobrik's new black facebrick was used for the feature treatment of external façade elements. The same concept was repeated

internally for brick enclosed service areas and feature walls.

Conceptually the B+P office is designed over 2 levels, but with greater floor to floor height to mimic the adjacent 3 storey buildings' overall heights. Overall height is also guided by a restrictive maximum height line, and an offset line from neighbouring residential area.

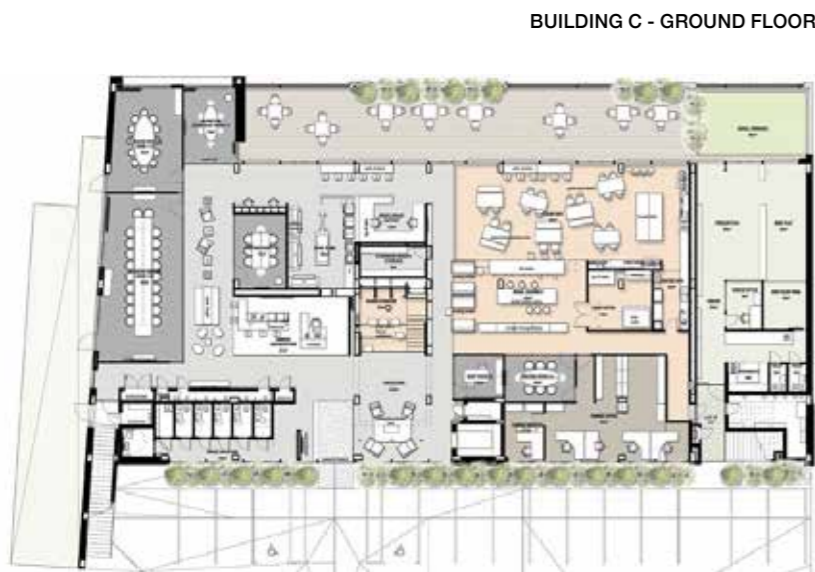
For Block C, the lower level caters for mainly client interface spaces, the barista-reception area, with gallery/lounge spaces at the meeting rooms and large open plan collab-cafe space where different flexible functions are accommodated; model building, laser cutting, sample boarding, coffee drinking, printing and binding all happen here.

The upper level double volume office is the 'creative hub', where 90% of the staff work together in a large space interrupted only by the open 'atrium cum auditorium' space with "Google-esque" steps and seating. An open, exposed steel frame structure and roof with glazed façades, envelopes the clustered rows of desks. There are no cellular offices - working space is totally egalitarian and flexible.

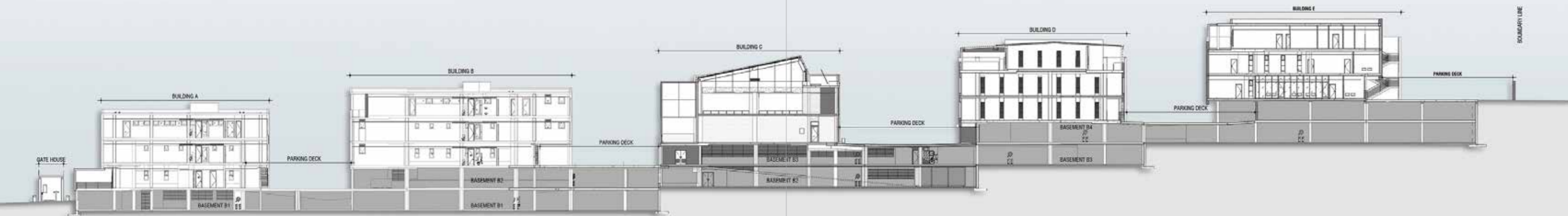
#### Sustainability

From a sustainable design perspective, the building has a 4-Star GBCSA Building rating and a 5-Star GBCSA Interior rating, managed by Solid Green Consulting.

Passive design through East-West 'solid' façade orientation, reduced glazed exposure and small openings, work hand in hand with active design features such as the sun screening, insulated roofs (heat and sound), low energy lighting (LED) and air-conditioning (VRV), to make the occupancy comfort optimal.



BUILDING C - GROUND FLOOR







#### External Architectural Materials

Externally, the material and colour palette is carried through from Phase 1. The palette is monochromatic in the use of mainly black for the podium and basement façades, with a rendered finish. The upper levels are treated in white plaster and paint for crisp, clean lines and are highlighted with warmer timber tile accent strips on buildings D and E, to follow on from the other buildings. The timber tile 'boxes' are a recurring design element, knitting the development identity together. Darker performance glazing contrasts with the white façades. The B+P building is slightly different in having black facebrick at podium level, complemented by a vertical design black balustrade for a subtle difference.

#### Interior Concept, Space Planning & Materials

B+P's new Head Office is an architectural 'experience' as visitors are warmly welcomed into the world of design creativity. A 5-Star Interior Rating was achieved on Round 1, boasting various innovative green design features, sustainable

materials, upcycling and creative resources. B+P Architects' Interior Designers worked closely with Solid Green Consulting to ensure the most sustainable material choices were made.

Materials such as FSC sustainable wood and flooring containing post-consumer recycled content were specified and the existing furniture from the previous B+P office was re-used. A birch-ply grand staircase is what first greets you as you step into the new offices.

The staircase was originally designed to form a multi-functional space, bridging the ground floor collaborative spaces with the first floor workspaces and doubles as a grand seating space for presentations on a 3x5m LED screen. During presentations or events, an acoustic curtain envelopes the space for privacy to form a multi-purpose auditorium.

The multi-volume upper floor allows for individual work stations with smaller breakout areas for quiet brainstorming or quiet focused work, while the lower level fosters a shared area of maker and assembly space, meeting rooms and a fully equipped kitchen.

The staff culture required a social space which meets an office space and today the space is designed to embody that. This is achieved with a collaborative café which can function as a bustling coffee meeting space on smaller tables, a harvest table where staff can rearrange the space and have lunch together, a bar where the bar stools come out and the 'participate' neon light doesn't turn off.

The building is designed to ensure maximum daylight enters the space, while minimising solar heat gains. This allowed for reduced electrical lighting requirements resulting in decreased energy bills. The large expanses of glazing utilised in the design creates a feeling of direct connection to the outdoor environment and with the inclusion of various indoor plants the biophilic nature of the space comes alive.



#### BLOCK D – RAIN

##### Interior Concept

After a restructuring and re-branding to launch SA's first mobile data-only network, Rain (formerly iBurst) needed a fresh new look for their new premises in Bryanston. Interior Designers, Pyramid Office were responsible for the interior design.

A client with an evocative name like RAIN is a real gift to a designer. Watery words like 'spilling', 'leaking' and 'pooling' inspired the look and feel. The concept was built around design elements that subtly referenced water to create a space that became the client's brand in built-form.

Furnishings with liquid lines, smudged water-colour carpet patterns, pendant light fittings reminiscent of rain drops and splash back tiles that shimmer like the surface of a pond are some of the main features in the space.

##### Space Planning

Like many businesses, RAIN anticipates a good deal of change and growth as they respond to the market's needs. Cellular offices were

planned along the perimeter to ensure an unbroken area for open plan workspace. The planning allows for growth in the workforce by adding people and furniture, without demolishing any walls. 120 Degree workstations were used to create a modular, easy-to-change system.

Focus pods, small break away rooms and open plan collaboration areas complement the open plan workspace. Each level has a pause area where staff can have coffee and a casual meeting.

##### CONCLUSION

On completion, The Main Straight stands as an icon along Main Road in Bryanston, boasting views from Midrand across to Sandton for its Blue-Chip tenants. The developers, together with their professional team, are proud of achieving an office development that offers premium space in a contemporary style, but yet still fits within the local space that Bryanston has to offer for its residents.





# 199 OXFORD

**199 OXFORD**  
Oxford Parks, Johannesburg

**CLIENT**  
Intaprop Investments

**PROJECT MANAGER &  
PRINCIPAL AGENT**  
Duncan Clark Project Management

**ARCHITECT**  
GLH Architects

**BASEMENT ARCHITECT**  
dhk Architects

**QUANTITY SURVEYOR**  
Gro2 Consulting

**CIVIL ENGINEER - ROADS**  
JG Afrika

**CIVIL & STRUCTURAL ENGINEER**  
Pure Consulting

**ELECTRICAL ENGINEER**  
RWP Consulting Engineers

**MECHANICAL ENGINEER**  
Adaptive Resource Engineers

**WET SERVICES**  
IZAZI Consulting Engineers

**FIRE ENGINEER**  
WSP in Africa

**SUSTAINABILITY CONSULTANT**  
Solid Green Consulting

**HEALTH & SAFETY CONSULTANT**  
Comprac Holdings

**INTERIOR DESIGNERS**  
Boogertman + Partners  
Ink Design Lab  
Giant Leap

**LANDSCAPE ARCHITECT**  
Insite Landscape Architects

**TENANT REPRESENTATIVE**  
Turner & Townsend

**MAIN CONTRACTOR**  
Concor

**PHOTOGRAPHY**  
Infrastructurephotos

The first phase is  
organised around a  
diagonal division of the site

Developed by Intaprop, 199 Oxford is the first completed building in the Oxford Parks precinct which is envisaged as a sustainable and cosmopolitan medium-density urban environment that brings 300,000m<sup>2</sup> of development rights to the Dunkeld precinct linking Illovo to Rosebank along Oxford Road in Johannesburg. The precinct will promote a 24h lifestyle with an office, retail, hotel and residential mixed-use environment. There is a strong emphasis on the design of the public spaces.

The vision for Oxford Parks is to build on the strength and unique energy of Rosebank to develop, from the outset, a dynamic, vibrant urban lifestyle with a strong pedestrian focus, located close to public transport offerings. Implementing a soft security policy without fences, the precinct extends the city in a seamless and fully integrated manner.

## Phase 1

The first phase of Oxford Parks is organised around a diagonal division of the site as a pedestrian extension of Oxford Road, inviting the eye and the pedestrians themselves into the heart of the precinct. 199 Oxford occupies the south eastern corner of Oxford Parks and is an office and retail mixed use building of six floors with a gross floor area







(GFA) of 10,035m<sup>2</sup>. The three basement levels are approximately 28,000m<sup>2</sup> in size with all parking below ground, improving the public environment.

#### Design

The precinct and the building in particular aim to be respectful of the public environment. As such, at ground level, the building's edges are set back to give walking shelter and are activated by high street retail and the entrances of the office buildings above. Designed by GLH Architects, the architecture of the building is modern, humble and timeless with an open and permeable character. Clear glass married with the warmth of natural stone provide for a soft palette of materials.

The attractive wedge-shape design is notable for its glass façades, created with 4,500m<sup>2</sup> of glazing. This design enhances the wellbeing of the building's users allowing ample fresh air, particularly unimpeded access to external vistas looking east over Johannesburg's treed suburbs and plenty of natural daylight. The emphasis of the building is on the Oxford Road façade with the other two façades being downplayed as they are only visible at acute angles through the pedestrian streets of the precinct.

The Oxford Road façade is east facing and consists of double façade clear glazing flanking the frameless atrium glazing. The transparency of the façade is complemented by the dynamism of the motorised blinds linked to a weather station that are tracking the light along the day, protecting

the office space in the morning and opening fully once the sun has passed the corner. To deal with the sun's heat through the glazing without overloading the air-conditioning system, a couple of innovations have been included. The first is a double-ventilated façade on the front of the building, involving two layers of glazing some 40cm apart. The outside layer is open at the bottom and at the top, allowing air to rise and exit this vertical channel as it heats, sucking in cooler air at the bottom and keeping the building cool.







### Interior

The atrium provides for a seamless transition between the outside and the inside of the building, allowing for reception functions, lounges, vertical circulation and distribution. This open, vibrant and bright space brings departments and people together. The observation lifts overlooking Oxford Road contribute to the pleasurable journey through the building.

The office spaces are an unencumbered rectilinear 'L' shaped space with the core at its centre allowing maximum sub-divisibility of the space in departments or separate tenants. This sub-divisibility of the building is further increased thanks to the double lift bank system that allows for a main tenant operating from one lift bank when the other lift bank services the smaller tenants separately.

### Sustainable Design

The project is targeting a 5 Star Green Star Office v1.1 Design Certification. It needs to achieve a



minimum of 60 points weighted points to obtain the 5 Star certification through sustainable initiatives that have been implemented throughout the design and construction process. Innovation category points considered some of the following:

### Financial Transparency

By sharing of costs/financial information related to the design, construction and operation of green buildings in the context of the Green Star SA certification process, this will create greater market transparency and awareness of the cost trends related to green buildings.

### Local Connectivity

The development is located within proximity to public amenities, which reduces the need for errands to be carried out by car. The increased variety of facilities available will encourage more staff and occupants to walk to adjacent community amenities and reduce the overall number of automobile trips taken by building users. The project exceeded the requirements by 100%, as 8 amenities from the specified list are located within 400m of a public entrance to the building.

Additionally, the development is one of the first to not sever engagement with the public realm by not having a fence and allow good passive surveillance and public access, which demonstrates leadership in our South African context.

The project is located in a precinct that is considering targeting a Green Star Precinct certification. This tool evaluates large scale development projects at a precinct/ neighbourhood scale. Unlike the other Green Star tools, the emphasis is on the site wide issues rather than building specific issues. The tool rates the planning, design and construction of a precinct only and it does not rate specific buildings or assess its operation.



### Management and Materials

The building is managed by a Building Management System (BMS), which helps with the way in which the building is run, from live metering to adjusting the automated blinds to the orientation of the sun.

No products that have high VOC levels were used, including paints or tile adhesives that are high in toxins which affect the wellbeing of the tenants. The design brings in generous sunlight without glare, assisting with comfort levels and a positive atmosphere in the workspace which in turn encourages a positive and healthy work-



force. The materials used at 199 Oxford have been focussed on the principles of design for disassembly. A combination of glazing, steel, brickwork, and stone give you a view of how this puzzle fits together. The majority of elements used were locally produced.

### Conclusion

The first phase of the Oxford Parks development is the exciting commencement of the holistic effort to make an exceptional intervention into the existing city structure, establishing a vibrant mixed use community along Oxford Road.





# THE MARC

**THE MARC**  
Sandton

**CLIENT & DEVELOPER**  
Eris Property Group

**PROJECT MANAGER**  
SIP Project Managers

**ARCHITECT**  
Boogertman + Partners

**QUANTITY SURVEYOR**  
AECOM

**TENANT CO-ORDINATOR**  
Tenant Co-Ordination Services

**TOWN PLANNER**  
Urban Innovate

**STRUCTURAL ENGINEER**  
Zutari

**ELECTRICAL ENGINEER**  
Claassen Auret Inc

**MECHANICAL ENGINEER**  
Spoormaker & Partners

**FAÇADE & TRAFFIC ENGINEER &  
ENVIRONMENTAL CONSULTANT**  
Arup

**WET SERVICES**  
Sutherland

**FIRE ENGINEER**  
Specialised Fire Technology

**EXTERNAL ROADS UPGRADE CIVILS**  
Kantey & Templer Consulting Engineers

**GREEN BUILDING CONSULTANT**  
WSP in Africa

**ACOUSTIC CONSULTANT**  
Linspace

**LIGHTING CONSULTANT**  
Pamboukian Lightdesign

**LANDSCAPE CONSULTANT**  
African Environmental Design

**HEALTH & SAFETY CONSULTANT**  
Cairnmead Industrial Consultants

**LIFT CONSULTANT**  
Projitech

**MAIN CONTRACTOR**  
Aveng Grinaker-LTA  
Trencon Village Walk JV

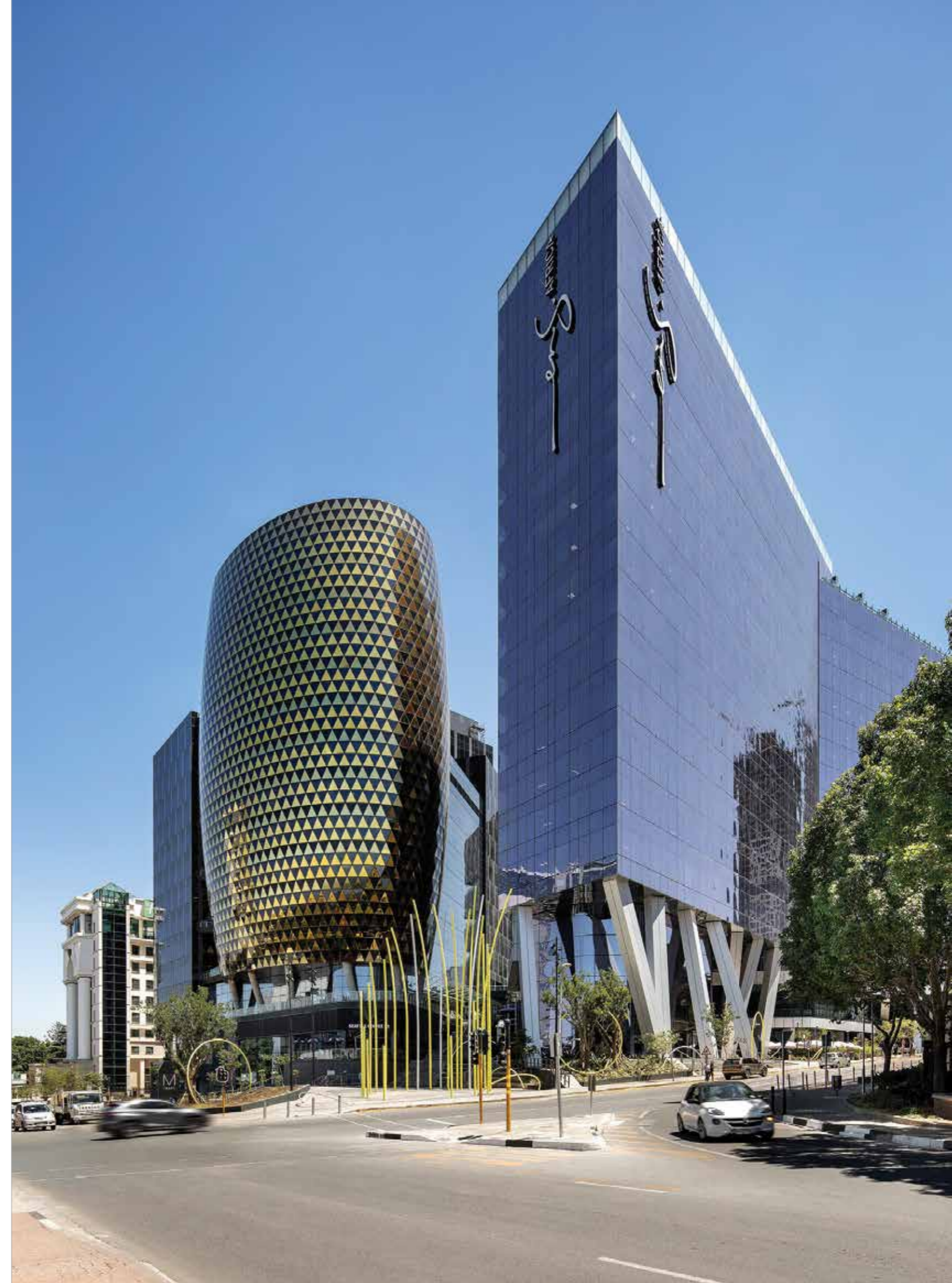
**PHOTOGRAPHY**  
Adam Letch

The MARC, the spectacular jewel-like edifice precinct on the corner of Maude Street and Rivonia Road in Sandton, developed by Eris Property Group and designed by Bob van Bebber at Boogertman + Partners, not only adds a bold, bright new icon to the Sandton skyline, but has also transformed the street-level of the precinct into a busy, pedestrian-friendly public space.

The MARC (an acronym for Maude and Rivonia Corner) has transformed the intersection in Sandton, Johannesburg, where the two roads meet, into a new urban landmark. The site, which was formerly occupied by the Village Walk Shopping Centre, has been redeveloped as a mixed-use precinct made up of two office buildings and a retail component, which includes restaurants, supermarkets, a fairly boutique shopping offering and a gym.

## Background

The MARC is on the site of the original Village Walk development which had struggled to remain tenanted and active. The then owners sent out a design competition to develop the full site as well as the Balalaika site to accommodate 192,000m<sup>2</sup>. This proved difficult to execute. Eris Property Group were then asked to get involved to see what was possible as a minimum intervention to extract enough value out of the existing development. They asked Boogertman + Partners to look at a scheme. This proposal







tried to use as much of the existing infrastructure as possible and to reposition the scheme in the market. This scheme was a minimum 45,000m<sup>2</sup>. What has finally been built in its current form is closer to 80,000m<sup>2</sup> as a full mixed use scheme.

None of the existing buildings of the old Village Walk development were retained. What was retained was the existing Balalaika Hotel and Crown Court Hotel with the 2 basement parking levels below the Crown Court. The new retail levels have been designed to ensure that the original connectivity between the retail and the hotel was maintained and improved.

#### Jewel-like Towers

Most visibly, The MARC consists of two towers: a dazzling 12-floor ovoid commercial tower with a gold-and-black faceted façade, which extrudes elegantly over the intersection and, set further back from the corner, a 17-floor tower occupied by a legal firm. Together they have become known as 'The Jewel' and 'The Jewellery Box' respectively and have created an entirely new identity for the intersection. At the same time, they have also transformed the character of the surrounding neighbourhood on street level by activating a vibrant pedestrian-friendly public domain.

#### The Site

One of the first questions the architects, Boogertman + Partners led by director Bob van Bebber, faced was how to create the visual impact and engagement demanded by the prominence of the site without competing to be the tallest new building on the Sandton skyline. "We went through a



process of mapping the existing aesthetics in Sandton, and found that one of the few opportunities to make a statement on the skyline was to use colour," says Van Bebber. So, the relatively diminutive but highly impactful gold-and-black façade was born, articulating the intersection like a glittering jewel cradled by the neighbouring 'boomerang shaped' tower. The tower's added height in turn imparts visual identity, even from a distance, from its position set back from the corner.

#### Accessible Urban Space

The architects placed a great premium on harnessing the opportunity the development offered to create accessibility and open up the public realm. Van Bebber says they went to considerable lengths to design "accessible urban space with no barriers" around the precinct while ensuring safety and functionality.

On street level, between the 6.5-storey basements and the commercial space in the towers above, is a two-storey retail level. Apart from providing a shopping destination, this retail podium level activates the precinct on street level, integrates the complex with coherent pedestrian movement routes through Sandton's commercial node and maintains connections to the adjoining hotels.

Van Bebber argues that it was "very important that we achieve on-grade pedestrian access off both Maude and Rivonia" to create easy pedestrian access. The natural fall of the site required an urban staircase from the Rivonia and Maude Street intersection, but for the rest, access is com-



pletely unimpeded. This was another reason for the arrangement of the towers. While the Jewel has presence, the tower connects at street level opening up considerable public space.

The generous pavements, public benches, public sculpture and soft landscaping bring human scale and appeal to the streetscape around the precinct, and the visible street frontage of the shops and restaurants and pedestrian accessibility draw office-dwellers out from the surrounding commercial buildings and onto the street.

#### Retail Component

The retail level, while fairly small and bespoke in its offering, is characterised by transparency







and visibility. Overhead skylights help to flood the interiors with natural light and blur the distinction between interior space and exterior urban environment, conceptually linking the retail space with the landscaped podium outside. The movement routes through the

interior are articulated with friendly curves and organic shapes.

Moreover, the subtle erosion of the boundaries between individual shops and mall space, achieved through the transparency of the glazing lines and curved glazing on the retail shopfronts, which is unusual for retail, facilitates a sense of connection, engagement and shared ideas and a shared, dynamic retail experience rather than the compartmentalisation of a typical mall experience. Similarly, the way in which the restaurants open onto the sidewalk space along Maude Street activates the street edge.

The MARC has also been designed to actively interface and connect with neighbouring properties – particularly the Balalaika Hotel and the Holiday Inn. Van Bebbler points out that “knitting The MARC back into the urban fabric” was essential to ensure the successful activation of the public space of the precinct, and to Sandton’s commercial centre more generally. The MARC is unique in Sandton in that it has three separate entrances, including the newly unlocked passageway from Stella Street to the south, which has been decorated with specially commissioned urban art, and draws pedestrians from neighbouring offices to the south, as well as Gautrain users, facilitating easy access to the centre and hotels beyond.

#### Innovative Façade Design

Arup provided specialised façade engineering services on The Marc’s façade. Matilde Tellier, senior façade engineer at Arup, commented, “One of the biggest challenges with a building of such unusual geometry was rationalising the façade envelope for efficient fabrication while adhering to the architectural concept.”



The façade’s surface is formed by a mesh of 5,620 alternating gold and black flat triangular elements whose vertices follow a nebula of points scattered in space with a specific logic.

The Arup team approached the Jewel’s façade panelisation design by forcing the maximum number of equal triangles on the surface and exploring various combinations of curves.

The curve, generated surface and triangular panels were coded in a parametric environment, allowing the geometry of the spiral curve to be adjusted to change the overall shape of the façade and achieve different degrees of “bulginess”. This enabled the architect to make geometric adjustments, with the parametric model ensuring that the geometric relationships that provide the smooth curvature and geometric rigour facilitating fabrication are maintained.

Tellier added, “We were able to accommodate and review any geometric or material changes and assess their impact almost instantaneously. The flexibility of our design process was a key factor in our contribution to the Jewel, which is much more than a building, it is a work of art.”

#### Branding

The name origination, logo and wordmark were done by Boogertman+Partners graphics team led by Liesl Niemand, Senior Graphic Designer and Judith Jurgens, Architectural Team Leader.

According to Judith, the advantage of the architectural team working alongside the branding team is the integration of the core architectural concepts into the brand output. Continuing this understanding and working together as one team ensures the consistent and cohesive application of brand from inception through to the full signage system.

#### Conclusion

What stands out for the architects is that they managed to turn around a challenging scheme and rescue it to eventually end up with a very successful mixed-use design that dealt with the compromises and complexities of towers on top of retail and make the retail respond to the public realm. This project was done by the team at the same time as they were involved as architects on the Discovery Head Office as well as the Werksmans Head Office on Rivonia Road. All 3 buildings are very different in the way the firm responded to the end users and different developers, but most importantly they all responded to the public realm in different aesthetically and functionally diverse ways.





# SANDTON GATE

## PHASE 1

**SANDTON GATE**  
**PHASE 1**  
Sandton

**CLIENT**  
Pod Property Fund

**DEVELOPER**  
Abland Property Developers  
Tiber Investments

**PROJECT MANAGER**  
Abland Property Developers

**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**  
Tristan McLaren

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.



The precinct is strategically located on William Nicol Drive within minutes of Sandton, Hyde Park, Rosebank and Bryanston







With a shared vision of demonstrating sector leadership in sustainability, the developers have achieved a first by obtaining 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 1 completed and the first residential building under construction.

#### Phase 1

Phase 1 is comprised of P-Grade office space of approximately 16,000m<sup>2</sup> 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 1 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 has been designed in such a way that the developers can obtain maximum yield and flexibility with regards to sub-divisibility. The building is able to be subdivided into 250m<sup>2</sup> offerings within the 2,300m<sup>2</sup> 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 1 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 1 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<sup>2</sup> 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 build-







**SITE PLAN**

ings 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 1, 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 1, 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 1, 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 'grey 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 is recouped within a short time period.

**Sustainability**

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/m<sup>2</sup>/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.





# PARK LANE WEST

**PARK LANE WEST**  
Menlyn Maine

**CLIENT**  
Menlyn Maine Investment Holdings  
Barrow Properties

**ARCHITECT & PRINCIPAL AGENT**  
Boogertman + Partners

**QUANTITY SURVEYOR**  
Rider Levett Bucknall

**CIVIL & STRUCTURAL ENGINEER**  
WSP in Africa

**ELECTRICAL ENGINEER**  
RWP Taemane

**MECHANICAL ENGINEER**  
C3 Climate Control Consulting Engineers

**WET SERVICES**  
WSP in Africa

**FIRE CONSULTANT**  
WSP in Africa

**GREEN BUILDING CONSULTANT**  
Solid Green Consulting

**ENVIRONMENTAL CONSULTANT**  
LEAP Landscape Architects

**LANDSCAPE ARCHITECT**  
Bertha Wium Landscape Development

**HEALTH & SAFETY CONSULTANT**  
Cairnmead Industrial Consultants

**MAIN CONTRACTOR**  
Barrow Construction

**PHOTOGRAPHY**  
Tristan McLaren

**P**ark Lane West is a new commercial building situated centrally in Menlyn Maine, Pretoria. Under development since 2008, Menlyn Maine is fast becoming the business precinct of choice in Pretoria, with a mixed use offering of residential, retail, hospitality, medical and commercial.

Developed by Menlyn Maine Investment Holdings and Barrow Properties, Park Lane West was the first building developed mainly for sectional title use; it addresses a demand in the commercial market and offers flexibility which increases the appeal for investors and tenants.

## Design Concept

After considering the brief and the site parameters, the architects, Boogertman + Partners, felt it was clear the best design solution would be a perimeter office block with a central open atrium & garden. A focus on natural light and ventilation gives the building a light and airy feel.

Park Lane West was designed to provide for multiple or single tenant use per level, thus it was important to provide flexible access and service points for the different layout options on each level. This directly contributes to the design aesthetic, resulting in a staggered window grid following the differentiating floor plans and tenant needs.

The notion of using a single building to host small and large enterprises affords all users the benefit of a professional corporate image, but still allows for individual fit out



PARK LANE WEST



The architectural language is inspired by the larger Menlyn Maine precinct. The look and feel is Contemporary Natural.



and personalisation of each unit. Park Lane West has a total of 37,000m<sup>2</sup> over the 7 above ground floors, and the 5 basement levels. The basement houses 624 parking bays, and the office floors host over 13,000m<sup>2</sup> of useable office space.

#### Design Language

The architectural language is inspired by the larger Menlyn Maine precinct. The look and feel is Contemporary Natural. This modern corporate feel is achieved by means of smooth, sharp finishes and forms. It was important to balance

the more clinical contemporary aesthetic by utilising softer elements throughout the design. This was done by introducing landscaped areas and natural finishes at strategic points.

The multi-level atrium and garden offers a tranquil inner courtyard, providing a break from the busy urban environment, while the roof gardens allow the tenants views over Pretoria.

The façade comprises of both curved and straight large glazing panels as well as brickwork with a textured finish. The solid portions of the façade are interrupted by purpose made punch-

out windows arranged in a randomised pattern with the intention of animating the faces.

Given the brief to produce a multi-tenant building of this scale, the architects aimed to provide potential tenants with as much flexibility as possible with their fit-outs. For this reason, Park Lane West is a concrete super structure with a predominantly glazed façade. Internally, the office areas are surrounded with a clear glazed shopfront perimeter looking into the central atrium space. Ablution and lift cores have been treated with high spec tiles on the floors and walls,

whilst the internal perimeter bulk heads framing the atrium have received continuous LED strip lighting to highlight the curves. To soften the feel of the building, and activate the central atrium space large scale planting with a seating height perimeter was introduced.

#### Access

Park Lane West is accessed by by three main roads, January Masilela Dr, Lois Ave and Garsfontein Rd, linked to Park Lane West by Amarand Ave & Bancor Ave.







The development supports pedestrian connectivity in an effort to stimulate walking within the precinct to promote a healthier, greener lifestyle. Park Lane West acknowledges this by providing its main entrance on the green belt which serves as one of the main pedestrian routes. Ample basement parking is available with 24 hour security and Gautrain bus stops within a convenient walking distance away from the Park Lane West building, making it ideal for public transportation for tenants and clients.

The intention behind the external planting and the building's interface with the street is to create foot traffic around the building and encourage pedestrians to enter the building in an inviting manner. The curved façade, along with the high volume facing the mall, intends to do the same. With regards to the vehicular entrance, this is handled on the southern portion of the site with an impressive gate house leading to an on-grade parking deck.

The basements also host many bicycle racks to encourage the use of alternate means of transport. Inside the building, the impressive feature staircase intends to encourage pedestrians to not only walk up it, but meet informally on the large landings and engage with the atrium

space. Should the user not wish to use the stairs, there are 4 lifts in the building which stop on all levels, and finally lead up to the 7th floor which had a communal braai area and landscaped roof garden.

#### HVAC

The Park Lane West building is conditioned by a four pipe chilled water Thermal Energy Storage (TES) system with in-ceiling fan coil units. The phase change material TES system reduces the building's overall electrical consumption by more than 25% when compared to an already efficient chilled water installation. Each floor is provided chilled and hot water ringmains for maximum flexibility and the system offers individual control via variable air volume diffusers.

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, generators, fresh air and toilet extract fans and smoke extraction as well as the fire and security systems. The system continually interrogates the operating conditions and not only reports faults but also provides alerts if equipment does not operate within its design parameters. The system monitors and



PARK LANE WEST





ROOF GARDEN



OFFICE LEVEL 2



OFFICE LEVEL 1



GROUND LEVEL



archives all the building's data and compiles all the readings from the main electrical and water consumption meters providing the facility management staff metrics in the effective operation of the building.

**Sustainability**

The 4 Star Office v1.1 Design rating has been awarded and the building is also aiming for an As-Built rating.

All buildings in the Menlyn Maine are designed for a greener future, by addressing eight strategic categories:

1. Management
2. Indoor environment quality
3. Energy
4. Transport
5. Water
6. Materials
7. Land Use & Ecology
8. Emissions & Innovation

Fresh air is provided into the building at a rate of 66% above SANS standard. Energy uses of 100kVA or greater and all major water uses are sub-metered & controlled via BMS.

This project has reduced potable water use through rainwater collection and most notably by installing waterless urinals as well as other water wise-fixtures and fittings and thereby was able to achieve 5/5 points for reduction of potable water



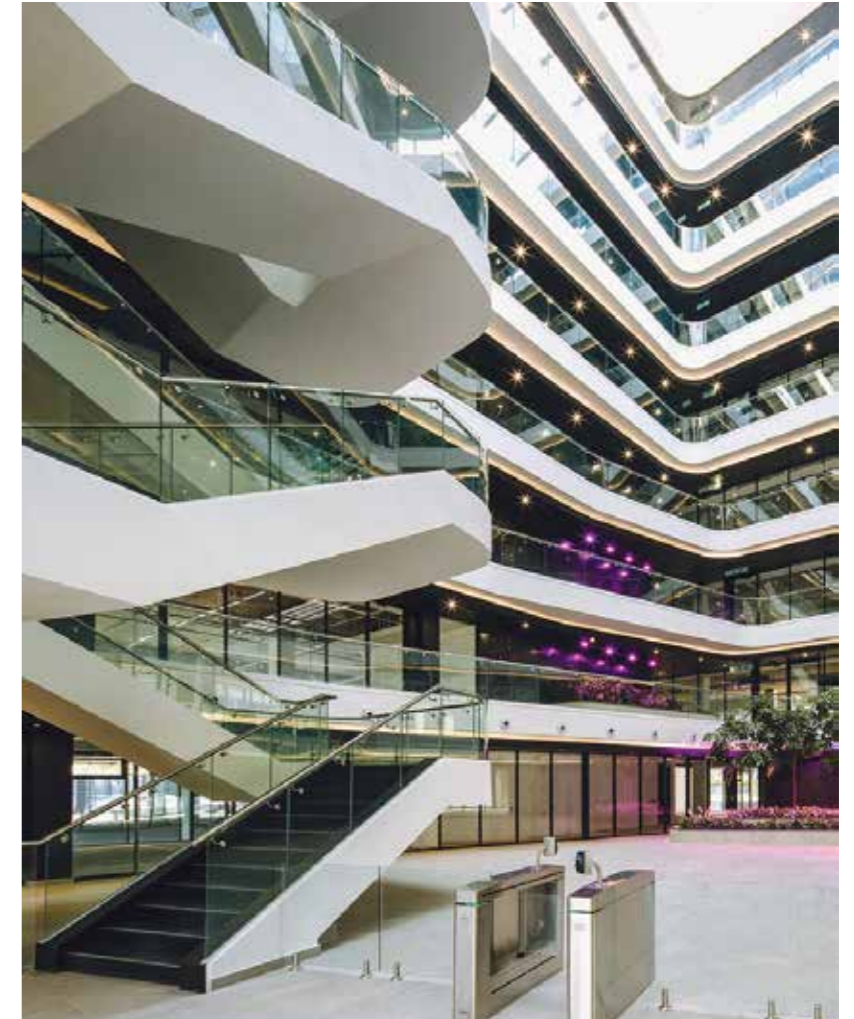
demand. Together with water wise plant selection, moisture sensors and drip irrigation, the irrigation system demand was also reduced by at least 50%. Most of the buildings in the Menlyn Maine precinct only use cold water in their ablution facilities, which shows that some consideration as to how people use buildings can go along way to both material (additional geysers or hot water systems, pipes, valves, heat pumps, and long term maintenance of these systems) and electrical cost. This kind of human centered design thinking is what can have major implication for how we design and build more sustainably in the future.

The building was delivered as shell and core, with the tenant fit-outs to be executed on a different contract as integrated fit-outs. This ensures less construction waste throughout the building's life span than a typical generic office fit-out.

Paints have low VOC which contribute to healthier indoor environments for building users. The open and attractive staircase in the building atrium reminds building occupants of the option to take the stairs instead of the lifts and entices them to do so more often also contributing to occupant wellbeing.

**Conclusion**

Park Lane West is a striking addition to the Menlyn Maine precinct, affording firms working there access to the many facilities, retail and restaurant options on their doorstep.





# 8 MERCHANT PLACE

**8 MERCHANT PLACE**  
Sandton, Johannesburg

**CLIENT**  
FirstRand

**DEVELOPER**  
Eris Property Group

**ARCHITECT, URBAN DESIGN,  
LANDSCAPE & INTERIOR DESIGN**  
Boogertman + Partners

**PROJECT MANAGER**  
Metrum Project Management

**QUANTITY SURVEYOR**  
Vusela Consulting

**CIVIL, STRUCTURAL, WET SERVICES &  
GREEN STAR CONSULTANT**  
Zutari

**ELECTRICAL ENGINEERS**  
Claassen Auret Inc

**MECHANICAL ENGINEERS**  
Adaptive Resource Engineers

**MAIN CONTRACTOR**  
Trencon Construction

**PHOTOGRAPHY**  
Tristan McLaren  
Courtesy of Trencon Construction

Situated at the corner of Rivonia Road and Fredman Drive in Sandton, 8 Merchant Place is the latest addition in an almost 30 year history of intervention on the Merchant Place site.

Architects Boogertman + Partners changed the Sandton skyline at the end of the 1990s when 1 Merchant Place, an 18 storey tower, was completed. The firm have been engaged since then with Rand Merchant Bank (RMB) and Eris Property Group as the campus has grown and expanded over the subsequent years.

## Brief

The brief from the client was to consolidate certain employee wellbeing offerings into one integrated building. This was primarily driven to start with by a desire to increase the gym size, which was at the time situated in the 9 Fredman Drive building, and to also introduce a EduCentre for use by staff.

As the project team began looking at the placement of the new building on the piazza site within the campus, they realised that there was a bigger opportunity to also accommodate the existing Wellness Centre, which would have a synergy with the gym, as well as a new venue that could be used for internal and client events.

## Design

The new building is a relatively modest architectural insertion size-wise, but will be experientially significant in the day to day activities of staff and visitors. At its core it is a building that ensures that the surrounding campus is utilised to its maximum efficiency by pulling non-core functions out of these and rearranging them into one

NORTH WEST ELEVATION







space. This complex brief is 'poured' into the piazza that sits between the existing buildings. The building expresses itself as a series of undulating horizontal planes that hover over the piazza space, with clear glazing inbetween to ensure maximum light penetration into the new spaces.

A distinctively reactive architectural language has been developed that sinuously fills the

space while using the existing structural grid from the parking basement below. The new structure purposefully contrasts the architecture that is there; its curvaceous shape opening new spatial opportunities between itself and the existing built form.

The building uses a minimal palette of external finishes to emphasise its dynamic shape. The clear glazing is framed above and below



by a triangular section and pearlescent white aluminium 'sill' detail that traces each of the curvilinear slab edges. This is offset by Tyrolean plaster on the minimal solid panels.

The new building is an extension of the existing RMB ThinkSpace precinct, a publicly accessible art exhibition space that inhabits the spaces between the buildings at Merchant Place.

#### Floor Layout

On the ground floor, the building splits into two portions, one half housing the bulk of the retail and restaurant, the other the wellness centre. The space between these two portions becomes a covered outside eating area for the restaurant. Entry to the floors above is through one access-controlled lobby to the lifts and stair cores.



8 MERCHANT PLACE



8 MERCHANT PLACE





The gym is situated on the first floor and part of the second floor. On the lower level the free weights area occupies a large open volume with views on all sides and connects to the change rooms and ablutions. There are studios on the upper level that open onto an external deck.

The second floor houses the new EduCentre. This facility opens onto a secure open-air playground that is only accessible

directly from the EduCentre. Babies, toddlers and pre-schoolers will all be accommodated and the space has its own small kitchen and laundry area.

The third floor accommodates an outdoor entertainment area that is supported by an events kitchen, allowing functions of various sizes. There is also an outdoor running track that connects to the gym via the fire stairs for staff wanting to exercise in the fresh air.



#### Design Challenges

The first big challenge was strengthening the existing columns in the basement and under the Bute Lane bridge link to take the new structure. This required the addition and expansion of the existing pile bases, as well as adding new rebar and width to the columns to increase their strength profile.

Architecturally, the new building is designed around the basement grid layout - which all the

Merchant Place buildings are based on - which creates a nice direct connection to the historical buildings, while showing how the same structural base can yield very different architectural results depending on how you approach it.

Another interesting challenge was dealing with the existing levels on the bridge link crossing over Bute Lane. The landscaping and water feature there previously covered a 1.5m step up where the bridge spans over







Bute Lane. The size of the building was such that the architects wanted to create a unified ground floor which was bigger than the upper portion of the slab. To overcome this, a new suspended 'bond-dek' slab was created that floats over the lower portion of the existing concrete slab. It also created a useful void space for dealing with the new services from the building.

The different uses that the architects wanted to incorporate into the building all had their own unique design requirements and the building needed to be flexible enough to accommodate all of these while also remaining economically viable. This was achieved by creating a central services core that then supplied the various different use areas on the different floors, freeing up the bulk of the floor plate to be used as necessary.

One of the big organisational questions was around where to position the EduCentre. Initial thinking was that it needed to be situated on the ground floor to accommodate an external play area. This created a clash as the piazza space is used through the day by staff, and is fully open to the public. The counter intuitive solution was to lift the EduCentre to the second floor, and create an open air play area on that floor. This allowed the security question to be resolved while also given maximum freedom of use of the space to the EduCentre. The play area is wrapped by the running track on level 3 which creates a shaded zone. To enhance the sense of exterior, a 4m high olive tree was planted in the centre of the play area to provide shade and a sense of the natural environment. To make sure there are no safety concerns the play area is enclosed on all sides by floor to ceiling glass, but is open to the sky.

#### Sustainability

The building is designed and constructed in line with Green Star SA principles and has recently achieved a 4-Star certification under the Public and Education Building scheme. The mixed-use development provides additional utility and promotes health and wellbeing to the Merchant Place Campus community.

Enhanced indoor environment quality is achieved through increased ventilation rates, glare control elements, optimised external views and connection to nature, thermally comfortable

spaces and use of occupant friendly materials and finishes. Dedicated exhaust risers within the tenancies ensure that air pollutants from printing machines are exhausted outwards.

The building's optimal energy performance is achieved through a rigorous commissioning of the services, use of energy efficient air-conditioning and lighting systems as well as the implementation of a comprehensive energy metering strategy. Where individually enclosed spaces are unoccupied for a period of time, the Building Management System automatically switches off electricity consuming services.

Water efficient fittings, endemic type of landscaping and a comprehensive water metering contribute to the efficient use of potable water.

Given the location of the building in the wider Merchant Place Campus, it makes use of centralised existing services and facilities, e.g. standby generator farm, back-up chiller capacity, wider campus BMS, and parking spaces, which for a conventional building would have had to be sourced independently. This arrangement makes the project unique from a re-use of equipment and facilities perspective, which certainly contributes to the improved overall environmental performance of the building.

Waste management was handled in a responsible way during construction of the building, and an Operational Waste Management Plan was implemented by the project owner to ensure that waste generation is firstly reduced and, secondly, that a large percentage is diverted from landfill by means of recycling and/or reuse.

And lastly, the building incorporates design for safety features aimed at limiting the spread of infections caused by Covid-19 and similar viruses. Touchless doorways are implemented

at the main entrance of the building as well as all entrances to the different tenancies.

The design credentials of the building, as well as the implemented occupant health and wellbeing features, reflect the client's commitment to environmental stability in its campus buildings and providing best in class support services to its employees.



FIRST FLOOR PLAN



GROUND FLOOR PLAN



THIRD FLOOR PLAN

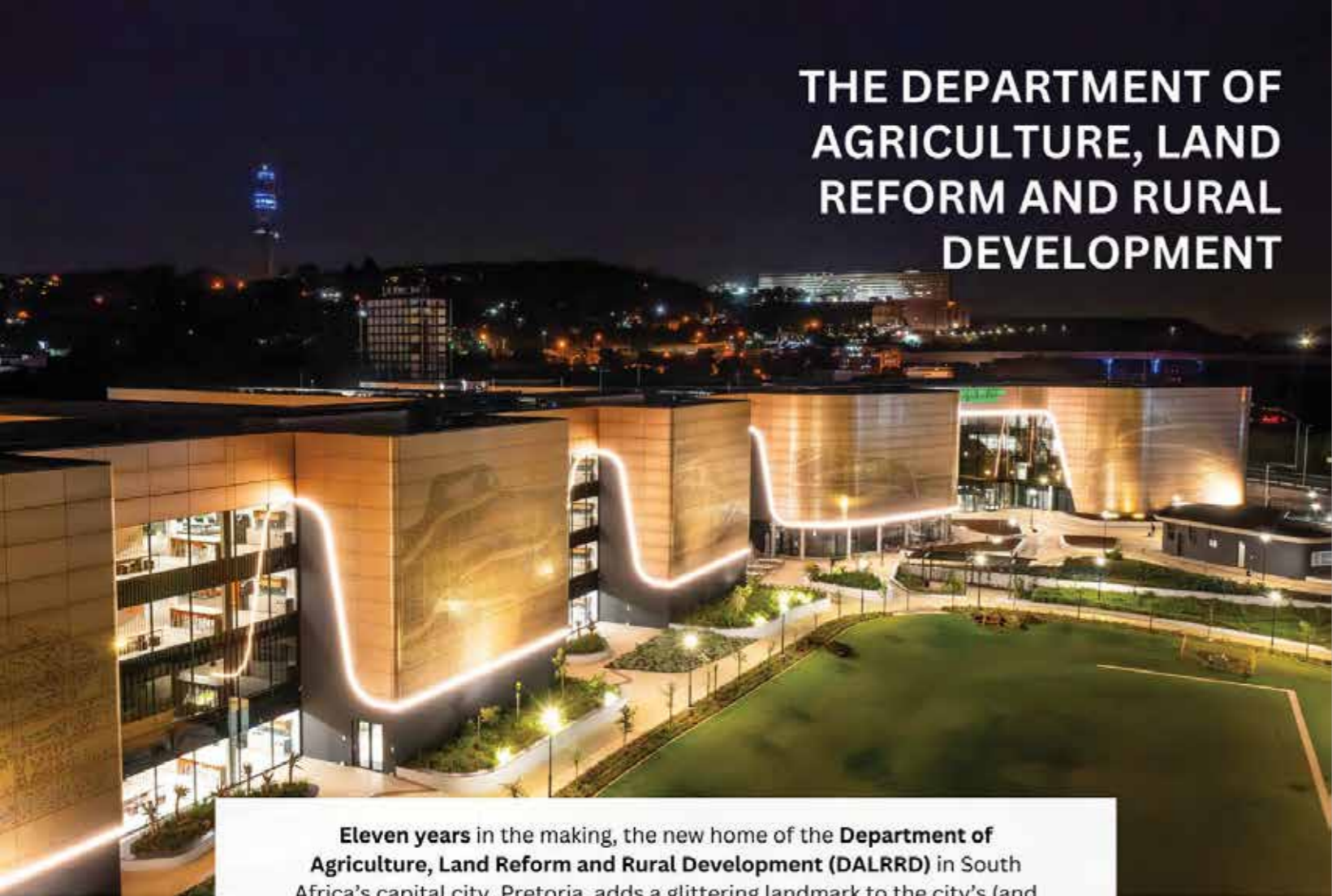


SECOND FLOOR PLAN





THE DEPARTMENT OF  
AGRICULTURE, LAND  
REFORM AND RURAL  
DEVELOPMENT



Eleven years in the making, the new home of the **Department of Agriculture, Land Reform and Rural Development (DALRRD)** in South Africa's capital city, Pretoria, adds a glittering landmark to the city's (and the country's) tradition of civic architecture.

Designed by **Boogertman + Partners**, the new building represents the diversity, inclusiveness and distinctiveness of all South Africa's people and their connection to its beautiful and varied topographies.



Boogertman  
**Partners**

Offices

2023

Department of Agriculture (DALRRD)  
Rewardsco Block A  
Irene Link Building C  
Matus  
15 Fredman Drive  
110 Oxford



# DALRRD

## DEPARTMENT OF AGRICULTURE, LAND REFORM & RURAL DEVELOPMENT

**DEPARTMENT OF AGRICULTURE,  
LAND REFORM & RURAL  
DEVELOPMENT (DALRRD)**  
Pretoria

**CLIENT (PRIVATE PARTY)**  
Tshala Bese Uyavuna (TBU)

**PROJECT MANAGER**  
DRD D&C Joint Venture (JV  
between WBHO Construction  
& Mhlaba Properties)

**ARCHITECT**  
Boogertman + Partners

**HERITAGE ARCHITECT**  
PLANDESIGN

**INTERIOR DESIGNER &  
SPACE PLANNER**  
Paragon Interface

**QUANTITY SURVEYOR**  
AECOM

**CIVIL, STRUCTURAL &  
FAÇADE ENGINEER**  
Pure Consulting

**ELECTRICAL ENGINEER**  
RWP Consulting Engineers

**MECHANICAL, WET SERVICES  
& ELECTRONIC ENGINEER**  
DTM Consulting Engineers

**FIRE CONTROL ENGINEER**  
Building Code Consultants

**SUSTAINABILITY CONSULTANT**  
PJC + Partners

**ACOUSTIC CONSULTANT**  
Linspace

**LANDSCAPE ARCHITECT**  
The Landscape Studio

**MAIN CONTRACTOR**  
DRD D&C Joint Venture (JV  
between WBHO Construction  
& Mhlaba Properties)

**PHOTOGRAPHY**  
Sebastian Vos  
Sarah de Pina  
Salome Kruger

Eleven years in the making, the new home of the Department of Agriculture, Land Reform & Rural Development (DALRRD) in South Africa's capital city, Pretoria, adds a glittering landmark to the city's and South Africa's tradition of civic architecture.

Designed less to dazzle than to serve as a powerful symbol of the department's central commitment to "secure a better quality of life for all", the new building's design arises from the foundational principles of its vision and values that reach back to the seminal statement in the Freedom Charter: "South Africa belongs to all those who live in it." The new building represents the diversity, inclusiveness and distinctiveness of all South Africa's people and their connection to its beautiful and varied topographies.

The new building is located on the grounds of the old Berea Park, once an integral part of Pretoria's sporting history. It is conveniently located on the southern edge of Pretoria's CBD and the suburb of Sunnyside. Once the core of social and sports activities, the site has gained a new purpose whilst also breathing new life into some of the site's heritage buildings.





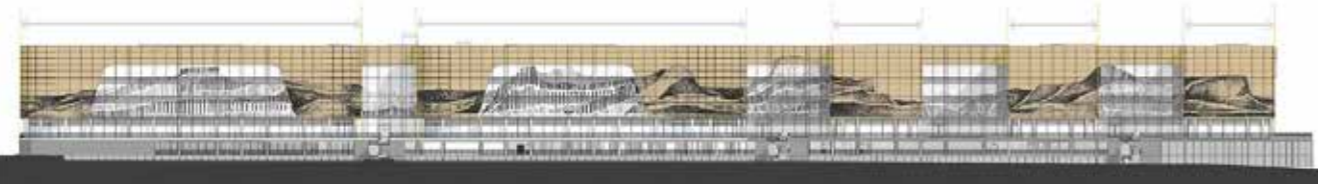
**BUILDING A**  
Kwa-Zulu Natal  
Drakensberg

**BUILDING B**  
Free State  
Golden Gate

**BUILDING C**  
Western Cape  
Table Mountain

**BUILDING D**  
North West  
Pilansberg

**BUILDING E**  
Limpopo  
Waterberg



EAST ELEVATION

**BUILDING E**  
Northern Cape  
Kalahari Dunes

**BUILDING D**  
Gauteng  
Magaliesberg

**BUILDING C**  
Eastern Cape  
Tsitsikamma

**BUILDING B**  
Mpumalanga  
3 Rondavels

**BUILDING A**  
Kwa-Zulu Natal  
Drakensberg



WEST ELEVATION

### DESIGN CONCEPT

The central design concept was inspired by the land itself, which lies at the very heart of the department's activities: agriculture, forestry, rural development and land reform. The curved, organic shapes of the building and its low-slung form take their cue from shapes moulded by nature itself. The architecture quite literally hugs the ground rather than towering vertically over it, almost as a refined or abstracted landform itself. Its edges rise and fall like the curves and carved hollows sculpted by natural forces. Its

dimensions and scale, too, are intentionally respectful of its context, with the city and the Magaliesberg mountain range forming its backdrop.

The building consists of five nodes or wings leading off a central spine that bends along the curve in the Apies River, which runs along the edge of the site. This long, low form creates the wide floorplates that facilitate a light, open, friendly and spatially connected environment in line with the department's values of inclusivity and progressive organisational culture.

### THE FAÇADE

The distinctive identity of the building, however, is most emphatically defined by its shimmering façade, which is essentially an artwork in its own right: a complex unitised design of individually machined metallic materials and glass surfaces etched with a powerfully symbolic design. The envelope becomes a canvas for a large-scale image that wraps around the building's elevations.

While the glint of the metallic finish makes reference to the mineral wealth beneath the

soil, its copper and golden colour is drawn primarily from the rich ochre tones of the soil that is endemic to many parts of the country. The highveld's golden sunsets after its famous summer thunderstorms introduce an atmospheric dimension to its range of potential associations. The façade's shimmering finish enhances the effect of the building's fluid lines, adding dynamism and constant variance to its appearance, constantly refreshing its appeal.







The design of the artwork that wraps the buildings draws on the natural beauty of South Africa's vast and varied landscapes. The most iconic mountain peaks from each of the country's nine provinces are fused together to create an image of a unified landscape that encompasses the whole country. It has been abstracted to

make a pointillist design, which in turn has been executed as a perforated pattern on the metallic façade, assembled from the painstakingly positioned units that make up the façade.

Similarly, a linear design approach, which appears on the glass façades, signifies the urban landscapes of the country. This



glass surface slips behind the skirts of the golden façade as it rises and falls. These two representations – their designs informed by traditional South African craft and artistic techniques such as beading and basketry – meld into a symbolic depiction of South Africa's urban and rural landscapes intercepting each

other, ultimately forming a unified symbolic representation of the whole country. All South Africans find themselves and their love of the land represented in this giant artwork, symbolising their connection and their right to the land, and signifying the department's embrace of all the country's people and landscapes.



GROUND FLOOR PLAN





## INTERIORS

From the interiors, the glass façades facilitate a powerful connection between the interior of the building and its context, looking out over the landscaped grounds, over the city and to the mountain ranges beyond. The vision that informed the architecture and façade design is sustained in the interior spaces, blurring the distinction between the exterior and interior design of the building, welcoming diversity and emphasising the presence of the land in the inner workings of the department.

The urban and rural landscapes of South Africa represent a diverse narrative, propelled by cultural production. The addition of this new architectural landmark to the capital city seeks to represent these landscapes and the staff that occupy the building represent the inhabitants its inhabitants. The interior design reinterprets elements found in these landscapes such as texture, organic form, colour and pattern and applies them to the functional outputs such as space planning. This results in a spatial/design response that's contextually informed, aesthetically on brand, fosters social cohesion and culture production, and is led by the users.

The country's topography is expressed in elements throughout the building, from the atriums to the office spaces. Details designed into the bulkheads, ceiling finishes, floor tiles, timber screens, elements of the joinery and panelling, and even the shape of the planters, all celebrate the natural beauty of the country's landscapes. The colour palette takes inspiration from earthy tones of greens, oranges, ochres and taupes. Each floor has been allocated a colour from the palette, allowing for easier wayfinding within the building. African influenced textures and organic shapes combine with a contemporary look and feel, and local artists have been commissioned to provide some unique custom finishes.

The graphic design of elements such as the wallpaper and the remarkable vinyl decals that feature on the walls at key points, such as the ground floor main entrance, are drawn from the patterns created by agricultural endeavour and human interaction with the land: the crop circles, furrows, terraces and rows that shape the land have been abstracted, simplified and transformed

to become graphic design elements in a larger, unified composition.

The interior architecture serves both the public face of the Department as well as the day to day requirements of its staff contingent. The public face of the building contained within two large atria has been designed to allow for practical interaction with visitors with business with Deeds and Surveyor General departments. A 250-seater auditorium, client meeting rooms, a canteen and deli are also accommodated here.

Staff office floors are located in the wings leading off the central spine are open plan with meeting rooms, phone booths and pause areas allowing for privacy and break away opportunities.

Located on the same campus, the original Berea Park Clubhouse, which is a Heritage building, has been extensively and sympathetically renovated, and is now being utilised as a training facility for the DALRRD.

Outside, the landscape design employs plantings of locally grown crops and vegetables such as maize, which at points come right up to the building edges, forming a base and making a symbolic connection where landscape and architecture meet.







**ELECTRICAL DESIGN**

An electrical supply of 4,5MVA was provided to the site. The design philosophy applied was to provide a 4 Star green design rated commercially acceptable office building. This entailed careful selection of equipment installed that was cost effective & maintenance friendly whilst also being energy efficient so as to produce cost savings to the end user.

**Key Features**

**MV Distribution** - A purpose built 11kV sub-station was erected on the site boundary to supply power to the development. 2 x consumer transformer sub-stations each housing 2 x 1,250kVA dry type transformers was located in the basement.

**LV Power Distribution** - 2 x main LV distribution board (MDB's) fed overhead by means of 2,000A Aluminium busbars.



**Emergency Generator Supply** - 2 x 1,250kVA generators installed in synchronous mode in order to optimise running costs, whereby only one generator will be operational at minimum load. These generators were supplied from an 18,000L bulk fuel tank with remote refuelling point on the site boundary.

**UPS Power** - 4 x 160kVA UPS installed to provide uninterruptible power supply to the ICT server

room, desktop computers and all sensitive electronic equipment.

**Metering** - State of the art metering is provided including sub-metering for each floor and for loads over 100kVA as per Green Star design with meter readings available via the BMS system for system monitoring and tuning.

**Lighting** - State of the art energy efficient LED luminaires were used across the entire site.







The luminaires are all produced locally thereby promoting local manufacture. The office area luminaires provide the highest level of direct lighting comfort providing low glare, combined with the lowest energy running cost and maintenance, as the LED chipboards and control gear can be replaced.

**Lighting Control** - All basement lighting is motion sensor controlled via grouped zones in order to reduce energy consumption and

maintenance costs. All internal lighting control is achieved using motion sensors and in areas where natural light is prevalent, the light fittings are controlled by DSI smart motion sensors which include a photocell allowing the fittings to be controlled (dimmed down/switched off) should the illumination level of natural daylight be sufficient. This system further increases the energy efficiency of these areas and significantly reduces the energy running costs.



The external areas and façade lighting is controlled via a combination of photocell and time switches in order to further reduce energy running costs.

**CONCLUSION**

The new home of the DALRRD is informed at every point in its design by its primary purpose, which is to secure a better quality of life for all. It is at once mindful of the need to be inclusive,

broadly representative, respectful and welcoming to the needs of all who the department seeks to serve, and makes a powerful symbolic statement, representing the vision and aspirations of a country and its people through its connection to the land. Far from prescriptive, however, this building's architecture is designed to allow its occupants to evolve and adapt with the changing times, facilitating its endeavours and enabling the department's mandate well into the future.





To view the full publication visit: <https://viewer.joomag.com/architect-and-builder-offices-retrospective/0695033001727903592?short&>