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Page: 1

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FOR A SUSTAINABLE BUILT ENVIRONMENT

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## TWO OF A KIND

THE TWIN TOWERS OF  
140 WEST STREET



### PROJECTS

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Publication: Earthworks  
Date: Sunday, July 01, 2018  
Page: 16

## PROJECT 01



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Publication: Earthworks  
Date: Sunday, July 01, 2018  
Page: 17



# TWO'S COMPANY

The imposing 140 West Street in Sandton takes its  
cue from nature in more ways than one

BY GLYNIS HORNING

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The brief was daunting by any standard: deliver an iconic building befitting such a prominent site (in the heart of Sandton opposite the entrance to the Michelangelo Hotel, Sandton City, Nelson Mandela Square and the Gautrain Station); a building fit to be the SA head office for an international legal practice yet flexible enough to accommodate a variety of smaller tenants too; and above all, to ensure that it is eco-friendly – embracing nature and the best sustainable building practices.

The challenge, however, set by site owners Zenprop Property Holdings for 140 West Street, was well suited to Paragon Architects. In 20 years,

the design practice has grown to become one of the biggest and most prestigious on the continent, working in 18 African countries and delivering such extraordinary designs as Sasol Place, the Alice Lane precinct in Sandton, head offices for large local and international corporations, as well as large-scale residential, retail, educational, hotel and mixed-use developments. These have clinched top honours at not only the SA Property Owners' Association Awards, SA Professional Services Awards and Construction World Best Project Awards, but also the AfriSam - South African Institute for Architects Awards for Sustainable Architecture and Innovation.

These projects are acknowledged to represent some of the most advanced buildings in the country, pushing the envelope of what is possible architecturally and technically. And that, it turns out, was what proved Paragon's biggest challenge with 140 West: – to push that envelope still further.

#### POWER TOWERS

The design of the two towers, which lean away from each other, pushes the boundaries of what is possible – architecturally and technically





**'It has a subtle but very valuable effect on the way one feels when circulating through the building'**

According to senior project architect Kay Hausler: 'We started as we always do, with feasibility studies of what was possible on the site. Its advantages were that it was centrally located, on a slight rise in the land – ideal for something iconic that needs to stand out. Its disadvantages were that it was a long, narrow site with street frontage – and construction access – on only one end.'

The solution lay in an edgy interpretation of a design that has become something of

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a Paragon signature – a two-tower building linked by an atrium. The south tower of 140 West is 14 storeys high, commanding dramatic views of the city and its surrounds. The north tower stands at 10 storeys, mostly for a practical reason, Hausler notes – to allow more light into the south tower and atrium. The inner facades of the towers curve daringly away from each other and the two towers are also offset at an angle from one another.

Paragon worked with structural engineers Sotralis, which used complex hidden transfer structures to enable the glass and aluminium towers to lean outwards, while also removing the columns down the centre of all the floor plates (keeping the structure to the outer edges of the office areas). The towers are joined by a clear, frameless glass roof that appear to wrap over the point of entrance, enveloping the linking atrium.



**INSIDE OUT**  
The landscaping extends from the exterior into the glass-encased atrium, which serves as a bridge between the north and south towers as well as a meeting place for tenants and visitors

PHOTOGRAPHY TRISTAN MCCLAREN

## PROJECT 01



Sotralis managed this feat only because of the company's experience with other projects, including Sasol Place, Alexander Forbes and the twin towers of Alice Lane 3, says founder Steve Scoralis. 'But the Alice towers don't lean, as these do. It took sophisticated cantilevers and hard work, but it was very rewarding.'

The result is breathtaking – the towers resemble the wings of a spacecraft or bird, poised momentarily before taking flight.

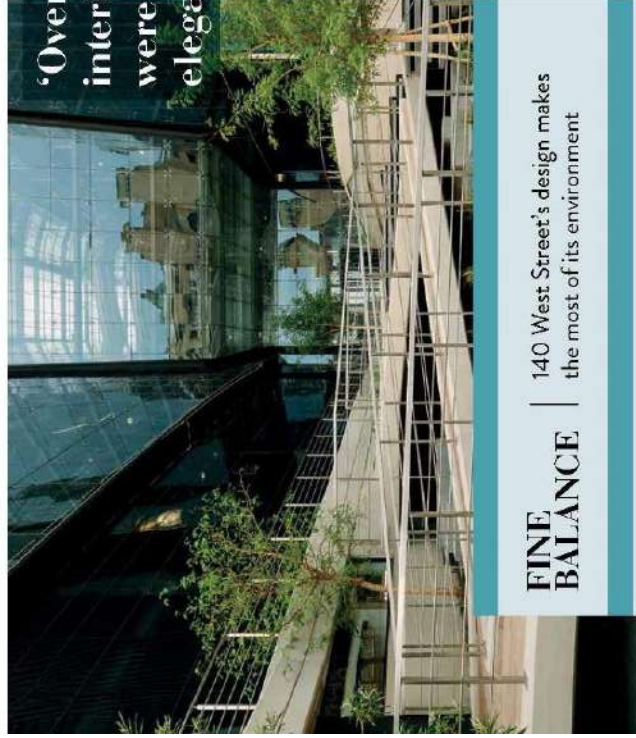
So far, so iconic – and it's flexible too. Piragen has developed a system to make the most efficient buildings that are highly diversified, while looking like a single [entity] from the outside,' according to Hausler. 'Each floor plate can allow for cellular offices on the perimeter and open plan in the centre. The core legal tenant is able to occupy up to 2,500 m<sup>2</sup> in a C-shaped linked floor plate, but each level can also be split into four or six

smaller cells to accommodate multiple smaller tenants, as small as 300 m<sup>2</sup>.'

In addition, five floors of offices have been linked at one end of the atrium, bridging the space below, encased in a screen of anodised aluminium, creating the effect of a giant seed pod.

'One of our primary intentions was to ensure the atrium wasn't a dull, lifeless space, enclosed by hard, glass surfaces,' says Hausler. 'For this reason, the atrium is designed as an internal street, with large trees, natural-looking floor finishes and restaurant tables – and private work spaces – spilling into the space on the ground floor.'

This open, textured 'pod' facade is an extension of that. 'We encouraged tenants to locate their pause areas, coffee stations and flexible work spaces along these open edges, with counters for remote working and coffee breaks. We wanted the atrium to feel alive – to be able to see people



**'Overall, the exterior and interior detailing and finishes were designed to be crisp, elegant and timeless'**

## FINE BALANCE | 140 West Street's design makes the most of its environment



There was a focus on materials that were **low-impact**; sourced **as close to the site** as possible; and **reused**. Construction waste was also **reduced**.



HVAC systems supply **optimum fresh air** through fan coil units and **efficient** air-cooled chillers, thereby reducing energy and water consumption – both of which are **monitored centrally**.



The building's position, **opposite the Gautrain station**, encourages use of **public transport**, and road upgrades provide for **cycle lanes**. Priority **parking bays** near the lobbies are dedicated to **'green' cars**.



The major facade faces **north**; floor plates are **long and narrow** to maximise **natural daylight**. **Artificial lighting** uses LED fixtures, and **motion sensors**.

throughout the day. And it works. People use these spaces throughout the day and it has a subtle but very valuable effect on the way one feels when circulating through the building.'

It's all part of being green – which has earned the building a 4-star Green Star Office Design V1 rating. 'We ensured 140 West was optimally positioned to receive enough natural light to keep the need for artificial light to a minimum,' says Hausler. 'The building's two narrow floor plates result in all workspaces having access to natural light. We used double glazing, insulated panels and performance glass to reduce glare and heat, while allowing in the optimum amount of daylight.... It's all about balance.'

The building's cores are split between the two towers and linked with a series of bridges that span the atrium. This maximises the building's area efficiencies and flexibility, according to Hausler. Instead of being constructed directly above one another, the bridges are fanned to ensure each receives natural light – and to create a sculptural element in the atrium volume.

Enormous aluminium fins were added to the gables of each tower to provide a degree of shading while also softening the effect of the somewhat forbidding dark glass below, offering a textured facade for additional interest.

Innovation was required at every turn. The facade subcontractor, Façade Solutions, assembled all the glazed panels on site, in a facility it built in the basement. 'The fins were integrated into the glass panels, which were fitted into aluminium mullion profiles,' says Hausler. 'They were taken by trolleys to the top basement level, pulled out, and craned up to the relevant floors, ready for installation. These panels are installed by essentially clipping them into one another and fixing them onto steel brackets, which are fixed into the slab edge.'

It was challenging for the engineers, acknowledges facade engineer Andrew Riley.

## SOURCEBOOK

### PROJECT 140 WEST STREET



#### OWNER

Zenprop  
[www.zenprop.co.za](http://www.zenprop.co.za)

#### ACCREDITED PROFESSIONAL

PJCarew Consulting  
[www.pjcc.co.za](http://www.pjcc.co.za)

#### ARCHITECT

Paragon Architects  
[www.paragon.co.za](http://www.paragon.co.za)

#### ELECTRICAL ENGINEER

Quad Consulting  
[www.quadafrica.co.za](http://www.quadafrica.co.za)

#### FIRE ENGINEER

TWCE Consulting  
[www.twce.co.za](http://www.twce.co.za)

#### LIFT SPECIALIST

S4E  
[www.s4e.co.za](http://www.s4e.co.za)

#### MECHANICAL ENGINEER

ARE Consulting  
[www.adaptres.com](http://www.adaptres.com)

#### QUANTITY SURVEYORS

Schoombie Hartmann  
[www.shi.co.za](http://www.shi.co.za)

#### STRUCTURAL ENGINEER

Sotiralis Consulting  
[www.sotiralis.co.za](http://www.sotiralis.co.za)

#### FACADE ENGINEER

A Riley and Associates  
[ariley.aranda@gmail.com](mailto:ariley.aranda@gmail.com)

#### ECOLOGIST

Scientific Aquatic Services  
[www.sasenvironmental.co.za](http://www.sasenvironmental.co.za)

#### WET SERVICES

Aurecon  
[www.aurecongroup.com](http://www.aurecongroup.com)

#### MAIN CONTRACTORS

Tiber Bonvec/WBHO  
[www.tiber.co.za/www.wbho.co.za](http://www.tiber.co.za/www.wbho.co.za)

#### PROJECT MANAGER

Capex Projects  
[www.capex.co.za](http://www.capex.co.za)

#### INTERIOR DESIGNER

Savile Row  
[www.savilerow.co.za](http://www.savilerow.co.za)

#### LANDSCAPE MANAGEMENT

The Ochre Office  
[www.ochreoffice.co.za](http://www.ochreoffice.co.za)

"We've created fins for three Paragon buildings now so the actual process has become second nature, but access for installation at 140 West was tricky. We erected massive scaffolding outside the building – the problem was there was no place to tie it back. It was done on a wing and a prayer," he says. "Paragon designs are always about pushing limits."

Yes: constructing a green building is as much about creating user happiness as protecting the planet, maintains Hausler. And the two objectives are apparent in a range of features (from an on-site gym to a restaurant and auditorium) and, perhaps most powerfully and naturally, in the landscaping.

This was entrusted to Karin Marais of the Ochre Office. The landscape begins on the pavement, where she oversaw the planting of mostly indigenous trees outside 140 West. It continues up the steps past a cascading water feature to a podium garden one level above the street, and into the atrium – bringing the outdoors into the building, where timber-finish floor tiles and lamp post-like lighting continue the feel.

"The lines of the landscape were designed to echo those of the amazing building, extending the floor design from interior to exterior, with curving and undulating planter walls creating interest and providing the opportunity to incorporate as much greenery as possible," says Marais. "Custom steel benches were designed and manufactured locally for the podium level, stretching out as extensions to the planter walls and becoming sculptures in their own right, as they gradually break from massed tubes to thinner hoops."

She has also created smaller gardens on terraces on the eighth, ninth and 14th floors – oases where people can relax or work on their laptops in a fresh, inspiring space. "I've kept all plantings natural and wild, combining dark green and grey foliage, which complement each other – and the building – beautifully."

As Paragon architect, founder and director Anthony Orelowitz puts it: "140 West aims not only to enhance the internal and external environment for the tenant and visitor, but to enrich its urban environment too." And that it does.

"Overall, the exterior and interior detailing and finishes were designed to be crisp, elegant and timeless," says Hausler. It's critical to design buildings of this scale that don't date. Someone said to me: "This building is beautiful. I like it because it isn't trying too hard." [They] really understood what we were trying to achieve." 🏡