

## PROJECT FEATURE

# 1 DISCOVERY PLACE

### 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

RLB Pentad Quantity Surveyors

### CIVIL & FAÇADE ENGINEER

Pure Consulting

### STRUCTURAL ENGINEER

Sotirialis Consulting Engineers

### ELECTRICAL ENGINEER

Claassen Auret Inc

Conscius Electrical Consulting Engineers

### MECHANICAL ENGINEER

Aurecon

### WET SERVICES

Sutherland Engineers

### FIRE ENGINEER

TWCE

### TRAFFIC ENGINEER

Kantey & Templer Consulting Engineers

### 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 REPRESENTATIVE

Baseline Project Management

### TENANT QUANTITY SURVEYOR

MLC Quantity Surveyors

### TENANT ELECTRICAL ENGINEER

MWKE Consulting Engineers

### TENANT MECHANICAL ENGINEER

WSP

### TENANT GRAPHIC DESIGN AND SIGNAGE

Glyph

**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 4 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.

### Site

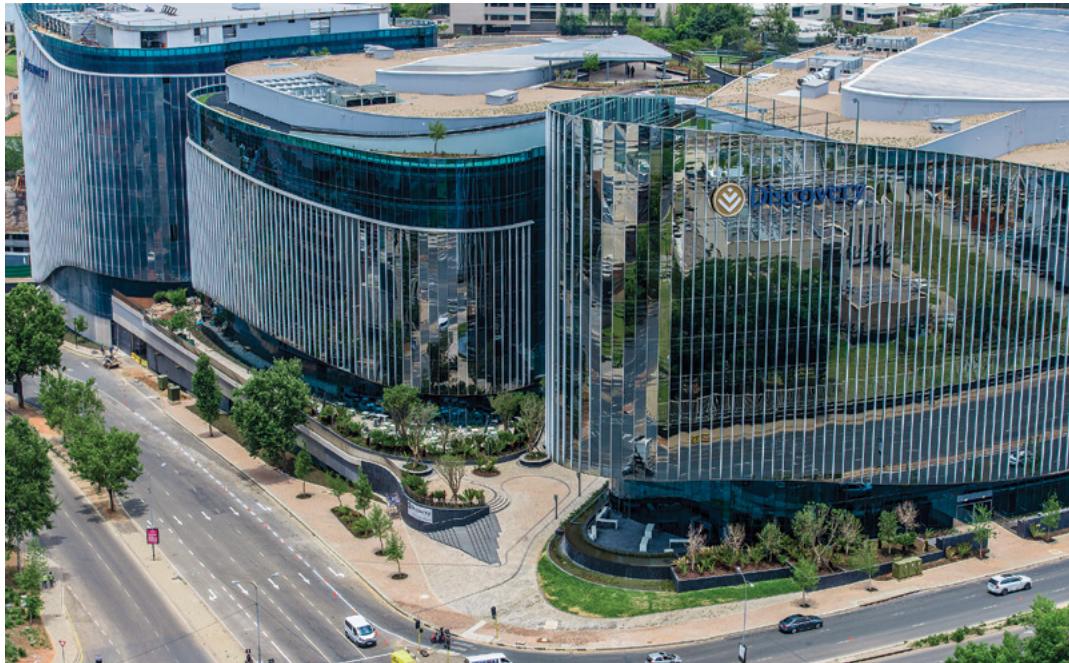
The site is on the corner of Katherine and Rivonia in Sandton. It sits at the highest point in Sandton, which gave the building a visual dominance without us having to create a tower, which suited Discovery's corporate structure.

The site previously had two office parks on it and a hotel on the corner, all of which needed to be demolished to make way for the building. The site forms part of a bigger urban precinct that Growthpoint Properties is developing. The permeability of Discovery's building on ground floor is important for the connection from Sandton to this new precinct.





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



### 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 architectural 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 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.

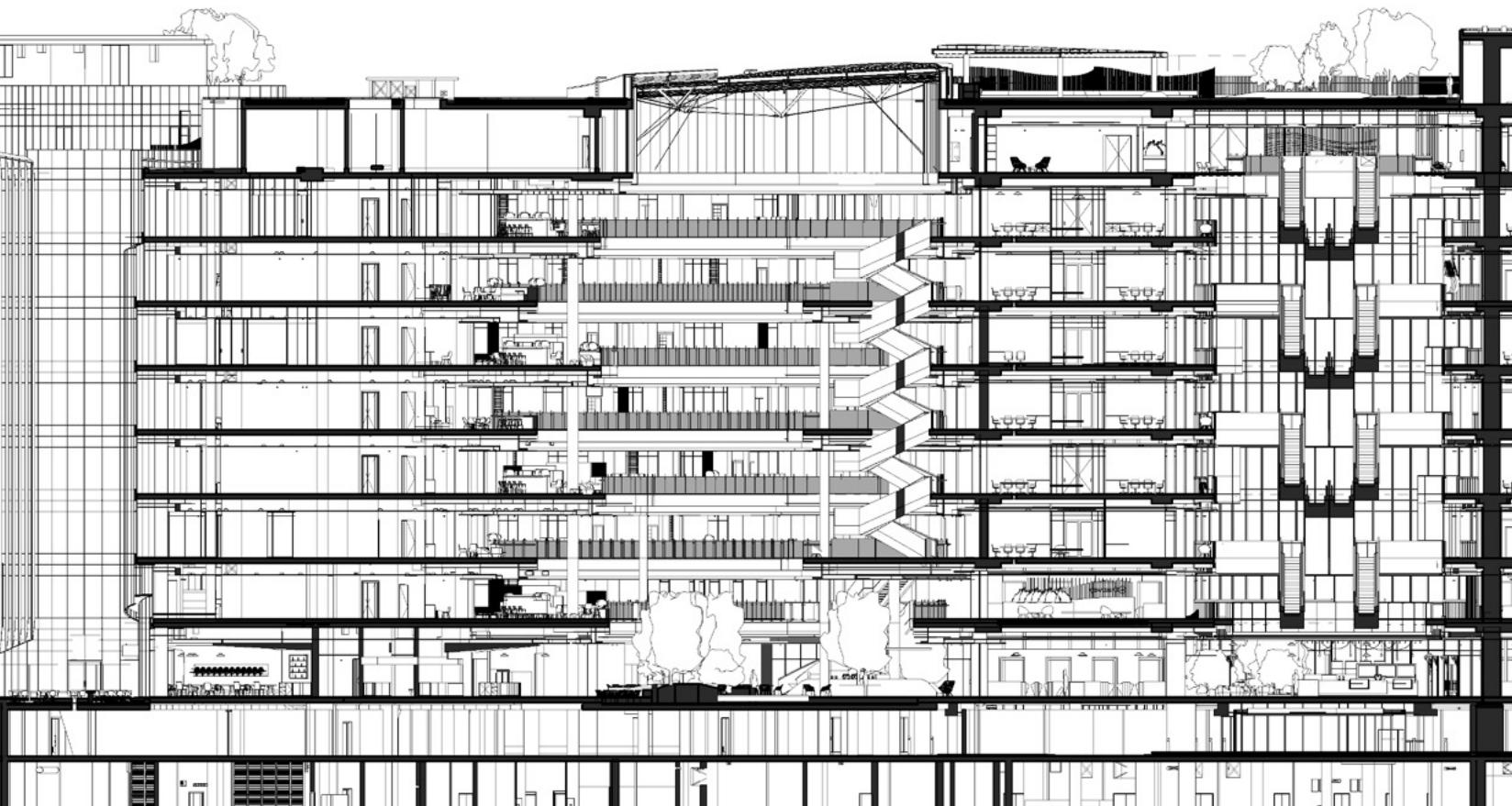
Level 8 is where the gym is located as well as access to the landscaped roof which extends up to level 9. These areas are for Discovery staff members, although various public events are held there from time to time. The roof has a 620m running track, a multicourt for basketball, netball and volleyball and a separate soccer court.

There are spaces for yoga classes and external seating areas. Level 9 of the Phase 2 tower will house the new Healthy Food Studio, where Discovery will host 'masterchef' cooking classes to promote holistic, healthy eating.

### 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 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 unobtrusive, 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.

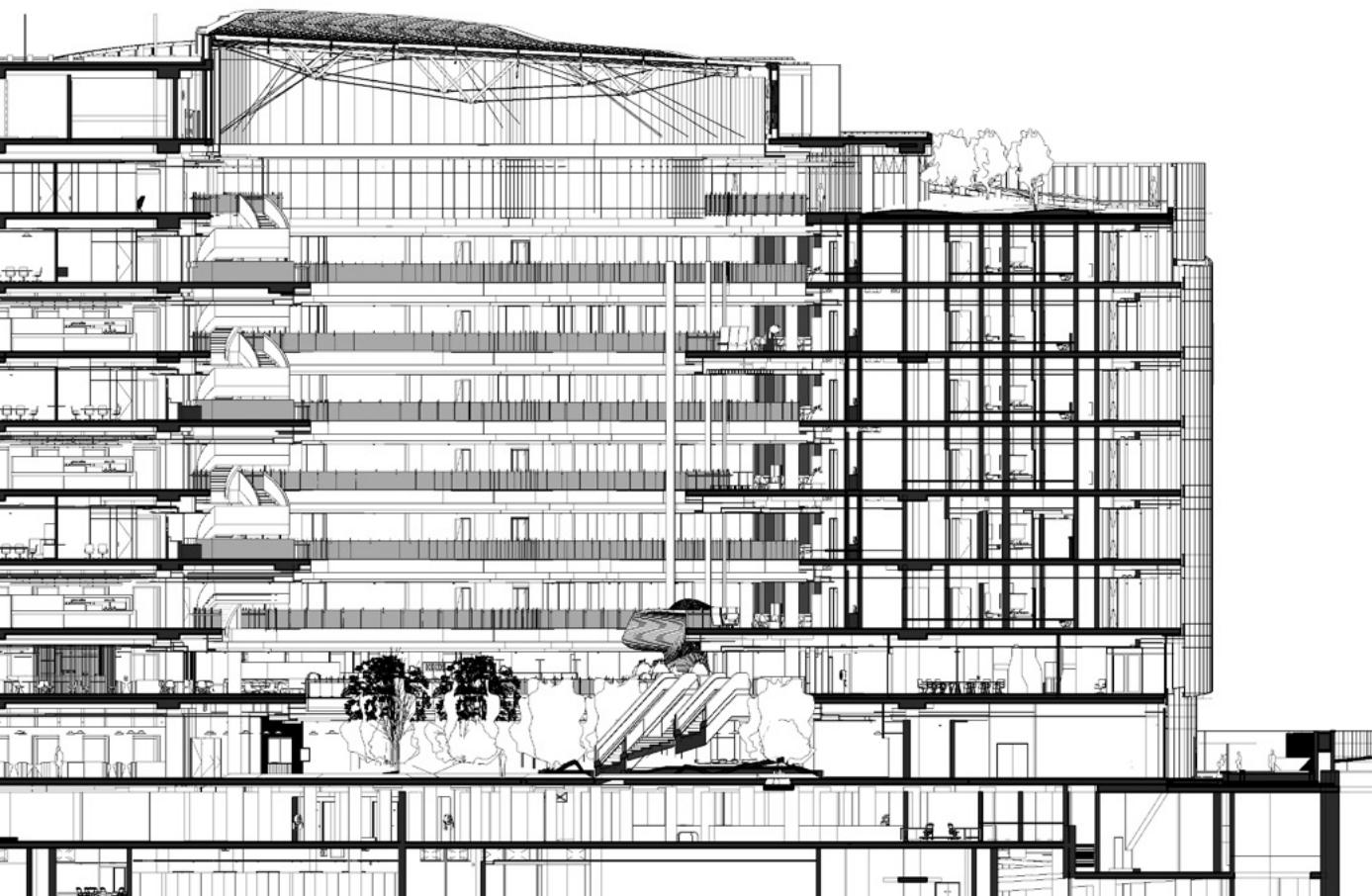
The architects were challenged with how to move people vertically through the space in a way that allowed them to enjoy the scale of the atriums and concourse without being intimidated by them. They needed to relate the human scale back to the building scale. This was achieved by creating double volume 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.

### Internal and External Materials

The core structure of the building is a reinforced concrete frame. The external façade is a double glazed, aluminium framed curtain wall suspended from the slab edge, with white extruded aluminium fins on the projecting "camisole" portion.

Internal materials are porcelain tiles over most of the common and public spaces. Carpet tiles and vinyl are used in the office spaces and pause areas. The interior designers injected warmth into areas where people gather, such as the pause areas, auditoriums, meeting rooms and training rooms with timber panelling on the walls and ceilings.

The main feature, communication stairs are made of steel plate, which we chose to create a crisp white ribbon that undulates within the atrium spaces.



### HVAC and Plumbing

HVAC is controlled via centralised plants that are on the roof and reticulate down shafts adjacent to the central core. Return air rises through the atriums and is pulled back into the plant rooms via a massive ventilation plenum that surrounds the atrium void. The HVAC allows for economy cycle cooling where the system will, as far as possible, use outside ambient air to cool the internal space. This allows for substantial energy savings for large parts of the year.

All showers and irrigation in the building reticulate to a centralised grey water plant, with that water being processed and re-used for toilet flushing and irrigation. All toilets are low volume flush, and all taps have flow restrictors fitted.

### Sustainable Elements

The building has achieved 5 star Green Star design rating, and the Green Star Interiors V1 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.

**The 'Glassing' of Discovery - Pure Consulting Pure Façades** were part of a bid that won the contract to build a new headquarters designed for Discovery's special requirements. They were therefore on the Design Team as the Specifying Façade engineer's and designers from the very beginning. 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!

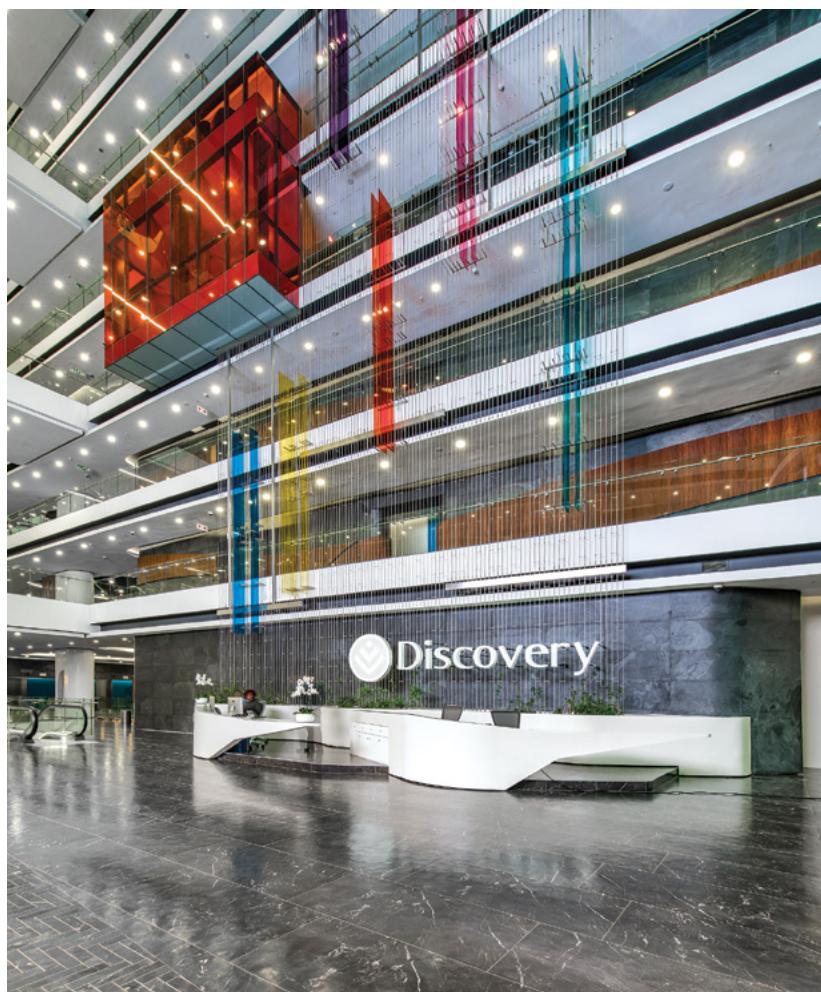
The roof lights are very special and were not easy. Tears and blood were shed metaphorically and tempers were lost not so metaphorically over some of the issues sadly. But as the saying goes, we chose to do this because it is not easy. Something very special was required and generally that means something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

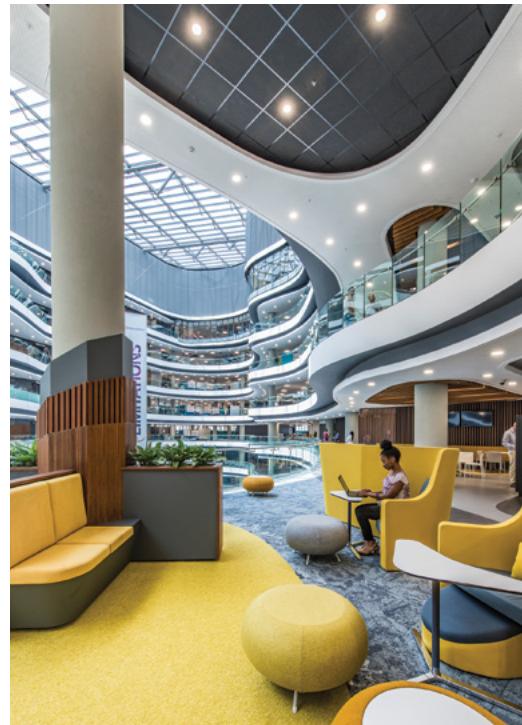
The shape of the roof lights are tilted cylinders sloping up from the centre and having an oval shape when viewed from above. The glass is SIGU's using thin Fritted Fully Toughened Glass in the outer. This outer is designed for hail resistance on the basis it breaks the hail and not the other way around! The inner glass is a thicker laminated glass that supports the outer glass on a bubble of insulating gas inside the SIGU's. As I said the roof lights are very special!"

### 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.

The entire project team worked very closely together. 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. There was never a decision made by a single party impacting multiple areas. There was always a discussion as a project team as to how the design intent was to be carried out, especially between Boogertman + Partners and Paragon Interface.





### Design Concept

Paragon Interface took advantage of the different skill sets of their team that complement each other. What was truly creative is that out of a set of so many individuals, they created a holistic image of what they envisioned the ethos of the building to be. What they presented and what possibly contributed to being awarded the project was the ethos, atmosphere, and environment created in the concept. If you visit the building now and compare it to the original presentation, the aesthetics may not be exactly the same, but the overall idea of how they saw Discovery occupying a building is still very much the same and still very much the strongest part of the design development.

### 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

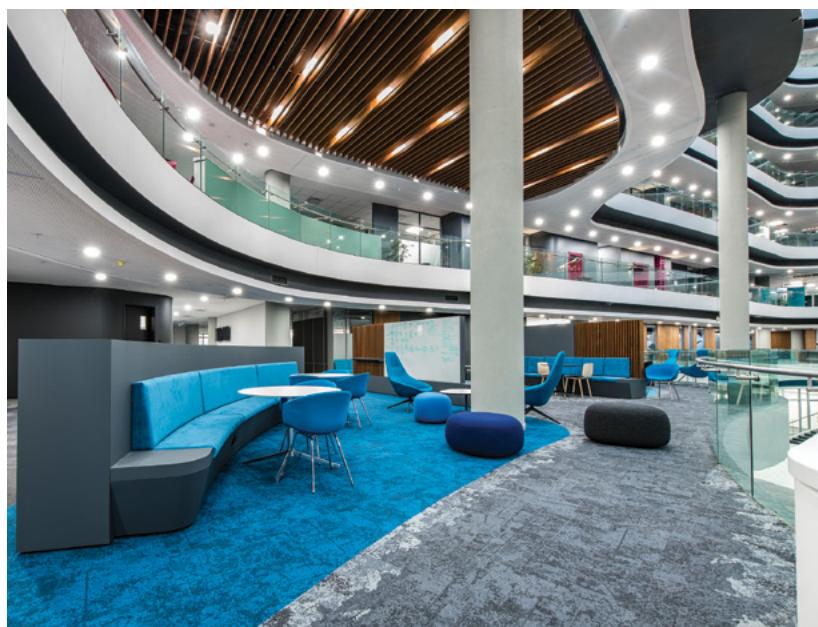
Circulation was a fundamental driver throughout the design intent. When you have so many staff to accommodate on a 12,000m<sup>2</sup> plus floor plate, it is easy to feel lost and overwhelmed. It was important to humanise the scope of the building through the interior architecture and design. Wayfinding and visibility were key to ensuring

people knew where they were within the building. This was achieved was 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 breakout 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. Discovery's focus on the wellness of their employees is quite fantastic. 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.

## Space Planning

Discovery's internal space planning dept went through the process of reanalysing how staff would work right from the inception. They reformulated their existing furniture into an open desking solution. When you move people from one building to another some resistance is to be expected. A change management process was embarked

upon; developing a strategy to ensure employees felt comfortable and welcome when they moved into the new building.

Seating areas are open plan but populated so staff do not feel stranded. All of those areas have agile work spaces - high bench desking, working pods, small meeting rooms, meeting rooms with partitions, and a few traditional offices.

## 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.

