

Waterfall City:
smart, green and world class

Giles Pendleton, head of developments for Attacq

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The developers and investors involved in Waterfall City, the new urban node between Johannesburg and Pretoria, have had a rare opportunity to plan the development almost from scratch. This is important, given that our collective thinking about urban design, human behaviour and the role of technology has all evolved rapidly in about the last quarter of a century. **Asset** speaks to **Giles Pendleton**, head of developments for Attacq, the lead developer and the biggest investor in the Waterfall precinct about the progress of the development and what sets it apart.

A dynamic master plan

Critical to the success of any sizeable urban development is the infrastructure, and in light of Gauteng's ongoing traffic congestion issues, a working road infrastructure has been a key focal point of the master plan. In particular, the building of the planned K60 arterial road running east-west on the southern side of the precinct, has had much energy devoted to it.

"The various owners and developers here have made a substantial contribution to moving the construction of the road forward," says Giles, who emphasises that the road will relieve a tremendous amount of pressure on the existing road network and will also provide a necessary east-west route in a city which is dominated by north-south routes. Furthermore, the construction of the road will unlock development opportunities for a number of land parcels along it, including a residential development of over 20,000 units for the Waterfall Precinct.

While work on planning the necessary road infrastructure is moving forward, so too are many plans for commercial, industrial, retail, residential and hospitality developments. The main retail development anchoring the entire precinct – Mall of Africa – was one of the first projects to be developed at Waterfall City. Several office developments have already gone up, and of course, there are the iconic PwC Tower and Deloitte head office – both of which are giving wonderful impetus to the development of the precinct.

Two new four-star hotels are being planned for Waterfall City – one on the eastern side and one on the western side of the node – to serve the growing corporate hospitality market. The existing three-star City Lodge is also looking to expand.

Demand for industrial property has sky-rocketed, with the Distribution Campus, Logistics Precinct and Waterfall Junction all catering for light industrial, logistics and

video to play here

A video fly through of Attacq's currrent and future property portfolio at Waterfall City



distribution-focused businesses. Global names like BMW and Cummins have already taken large industrial space.

Building a smart city

The master plan, which includes all the above-mentioned land uses, is a dynamic one – with land uses being rethought as things develop or as it becomes clear that it makes sense to cluster certain activities together or spread others out. To a certain extent, Giles explains that this is being driven by the analysis of data received about the use of existing built assets in the Waterfall City area. While it isn't possible to gather data from every building at this stage, Attacq's vision for the precinct is for it to be a smart and sustainable city – with the smart aspect being powered by big data.

At the moment, certain data comes from corporate tenants, which have shared information about their hospitality requirements with Attacq. This has helped inform planning decisions about the hospitality offering in Waterfall City. In other instances, new smart buildings equipped with the latest building information modelling technologies are able to generate their own data on things like water and electricity use. This is just the start of something much bigger, because data points can be networked, generating large volumes of data or 'big data' – and this is when real insights can be gained.



BMW Distribution Centre



Cummins



New Deloitte HQ under construction

Story continues on the next page.

“The success of Waterfall City is about robust planning based on very strong data sets. A smart city is really a network of a number of data points which start to create ‘big data’ – and from that we can pick up user patterns and predictability, and use algorithms to determine a number of things,” Giles explains. In the same way that such data allows one to drive better efficiency in a single building, it can be used likewise in an entire precinct or city.

Understanding how spaces, resources, equipment and many other things are used gives one the tools to plan better from an operational and maintenance perspective, because the data gives one predictability. Also, it allows one to pick up very quickly when there is a departure from the norm in any of the monitored systems – electricity or water consumption, for example. Problems can be identified and addressed far more quickly than in the past.

Data not collected from client feedback is generated in many different ways – it might come from occupancy or motion sensors, CCTV cameras, or smart water and electricity meters, for example. Attacq is currently in the process of networking a number of building management systems in different buildings so that a real-time mapping process for the city can begin. “We ultimately expect to end up with a central ‘command and control’ centre for the city, probably with two main control centres. One would most likely be about



The Ellipse – the first luxury apartments in Waterfall City

things like safety and traffic management, whilst the other would focus on building management and aspects such as utilities and consumption," Giles says.

Being the best to attract the best

There are several important reasons for going to these lengths to build a better city, but probably the most important is to be able to attract the very best tenants. People will naturally seek out places that they feel offer them the best and most attractive options, whether that is about lifestyle or about work. City competitiveness is a very real concept these days, so if one can offer a better life-style and a better workplace all in one highly liveable and functional precinct, that gives one a distinct advantage.

So far, Waterfall City's list of corporate tenants shows that it is indeed attracting the best of the best, and Giles points out the reasons why: "We are effectively a private city with public roads, We run a safe, functional and clean city – a smart city environment which will also be a fully green city. In addition, our accessibility is better than most other premium business nodes," he says.

In attracting and retaining the best tenants, he says it is important to go beyond the physical environment (as important as that is) and get involved even further – at a level where as a landlord, one looks at ways to help tenants that go beyond the traditional responsibilities. Helping them gain control over their utility costs is one very important way to do this.

"The biggest risk to most of our tenants is not rental escalations – it is the out-of-sync escalations in their utility costs.

When you add rental and utility costs to obtain the total cost of occupancy, in many cases this number is rising faster than the businesses themselves are growing," he elaborates. By installing things like solar photovoltaic panels and smart electricity meters, implementing grey and black water recycling systems, and putting energy and water efficient lights and fittings into buildings, one can contribute to bringing this cost down in a meaningful way.

Interestingly, the development of a smart city environment is also intrinsically linked to being a sustainable city. Many of the measures taken to improve building and city efficiency not only help tenants' businesses run better, but they contribute to a better overall environment.



The world's largest mixed-use integrated solar power-diesel hybrid solution at The Mall of Africa. The 4,755kWp installation covers most of the centre's roof space, an area of approximately 45,000m² or 4.5ha.



Cell C



Accenture

“Our intention in the future is for all our buildings to be certified either under the Green Star SA or the LEED rating system, and we plan to retrofit existing buildings that aren’t certified,” says Giles, adding that Attacq has a strong sustainability agenda. More important than the individual building ratings, however, is the overall sustainability of the precinct, which is something that Attacq’s sustainability team has been working on and will continue to develop.

Well on track and proving highly attractive

Because of the size and nature of the Waterfall City development area, Giles says that it makes sense for Attacq to partner with a number of other parties in the development of various different land parcels. Each of the partners that Attacq is working with on a particular scheme brings something of their own to the process. Joint venture partners on current schemes within the precinct include Atterbury, Zenprop, Barrow Properties and Sanlam Properties

“We have developed approximately 60,000m^2 a year on average to date,” he says, pointing out that Waterfall is delivering more on a consistent basis than any other precinct in the country, bar Sandton. Attacq has mapped out a plan for delivering the many buildings in Waterfall City, taking into account the fact that the economy has its ups and downs.

Demand for the space being built is certainly healthy, and is being driven by a number of factors. “Firstly, there is a flight to quality – especially by corporate tenants,” explains Giles. Tenants are being drawn by the accessibility of the area, the new and more modern amenities, and the state-of-the-art smart environment that Waterfall offers.

Then there is a ‘flight to efficiency’ – and efficiency has been the driver of many of the new developments around Gauteng, be they in Sandton, Rosebank or here at Waterfall. Many of the beautiful new office buildings which have arisen in these nodes over the past few years have come about because many companies are consolidating their operations (often spread over multiple locations) into single offices. Waterfall makes perfect sense as a new central location. “Tenants are also looking to follow international best practice in terms of space efficiency – for example, achieving an average of one person per 10m^2 in their buildings. In a new building, they can either get more people into the same floor area that they previously occupied, or they can reduce their floor area by 20% for the same number of people,” he says.

Efficiency also applies to the energy and water efficiency that Waterfall’s buildings offer – and although South Africa might still be a relative newcomer to the green building world, tenants are quickly realising the benefits of occupying



PwC Tower overlooking Waterfall City



Executive management

From left to right: Tasje Kodda, company secretary; Peter De Villers, chief investment officer; Melt Hamman, CEO; Jackie van Niekerk, COO; Raj Nana, CFO; Giles Pendleton head of development.

a green building. In more developed parts of the world, certain tenants demand green buildings, and international corporations with offices in South Africa expect nothing less than they are able to find elsewhere in the world. In addition, given the power and water challenges that South African cities are facing, buildings which offer backup power and water supply redundancy are looking increasingly attractive.

When it comes to industrial tenants, demand is also high. A good many of the quality tenants secured for Waterfall's various industrial precincts have been attracted not only by the accessibility and central location, but by the fact that they can develop premises which offer the opportunity for future expansion. "This is much easier to achieve with a greenfields development," says Giles. "Many of the buildings we are developing have expansion opportunities built into them, and a tenant like Massmart, which has only been in its new building for a few years, has already undertaken one expansion," he adds.

He is pleased that Attacq's efforts to build a world-class city are being acknowledged in the market. When one is able to attract corporations of the calibre of PwC, Deloitte, Accenture and PSG (to name a few), the recipe is clearly working. Waterfall is proving attractive to many, and he says that there are even clusters of businesses emerging – in the financial and building services sectors, in the bio-medical and medical industries, and in the technology sector. "These are exactly the types of tenants that we want at Waterfall – value and GDP-accretive businesses who want to see themselves as part of a smart, green precinct," he concludes. **A+**