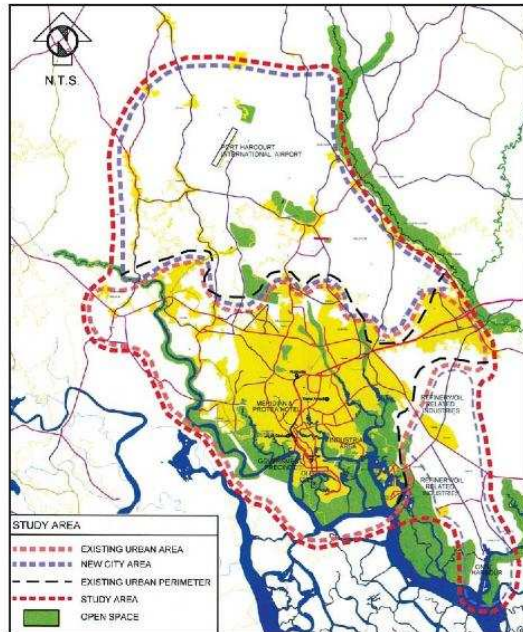


# PAST RECTIFIED, future fortified



An ambitious urban-complex solution, which has the potential to rival anything the First World has to offer, is on the drawing board for Port Harcourt.

Nigeria's main oil hub, Port Harcourt, has been an economic stalwart in the country for decades and, as a result of this, the city's population has grown to a point where its infrastructure can no longer facilitate its citizens. Established in 1912 as a railway terminus, the capital city of Nigeria's River State has experienced strong growth and its infrastructure is strained to capacity.

A 2006 census put its population at just under 1.4-million. The latest estimates put this figure closer to 2.5 million and growing at approximately 2.5% per annum. Simply put, the city's aging infrastructure and its size limitations, an estimated area of 360 km<sup>2</sup>, cannot support this growing population any longer.

In order to overcome these challenges, the plan is to design and construct a new city from scratch which will form part of a modern urban complex embracing the old



city as well as a new port. This ambitious project would have the capacity to house approximately 5-million people over the next 50 years.

Nico Kriek, director of urban and rural planning at Arcus Gibb, says the River State government initially approached the company regarding the design and construction of a ring road for the city. "However, when we arrived in the country, we saw that the old city had become totally dysfunctional." He notes that the city has been growing in an unregulated, informal manner since approximately 1975. Following Arcus Gibb's visit, state government representatives suggested to the governor of River State that the construction of a new city should be considered.

#### Population control

Arcus Gibb then developed a master plan for a modern new urban complex which would retain and embrace three key components of the existing city complex, Kriek informs *Urban Green File*.

1. The International Airport ("New City" area);
2. Old City, including the government precinct and old harbour; and
3. New Onne Port.

"The three cornerstones of the modern urban complex of Port Harcourt are the new city and the international airport, the old city with the government precinct some 40 km south and the new Onne Port located to the south-east of the old city," states Kriek. "We have designed the new

city to provide new opportunities for the population and, simultaneously, remedy what is wrong with the old city."

The primary aim of the new urban plan is to densify the population in the old city. Dame Aleruchi Cookey-Gam, administrator of the Greater Port Harcourt City Development Authority (GPHCDA), says: "We need to tame this city's urban sprawl. The new development will feature a mixture of low-, medium- and high-density residential areas, as well as areas specifically demarcated for industrial and commercial use. The GPHCDA was formed in April 2009 in order to facilitate the construction of this ambitious project."

Kriek states that, although urban Nigerian populations are quite used to high urban densities, 150 units/ha to 250 units/ha, the population density of the old city is well above this.

He notes that informal settlements have cut off the old city from its vast waterfront properties and, in some cases, during the long wet season, some of these houses are partially submerged but still inhabited.

In addition to overpopulation, basic infrastructure services are severely lacking in the old city.

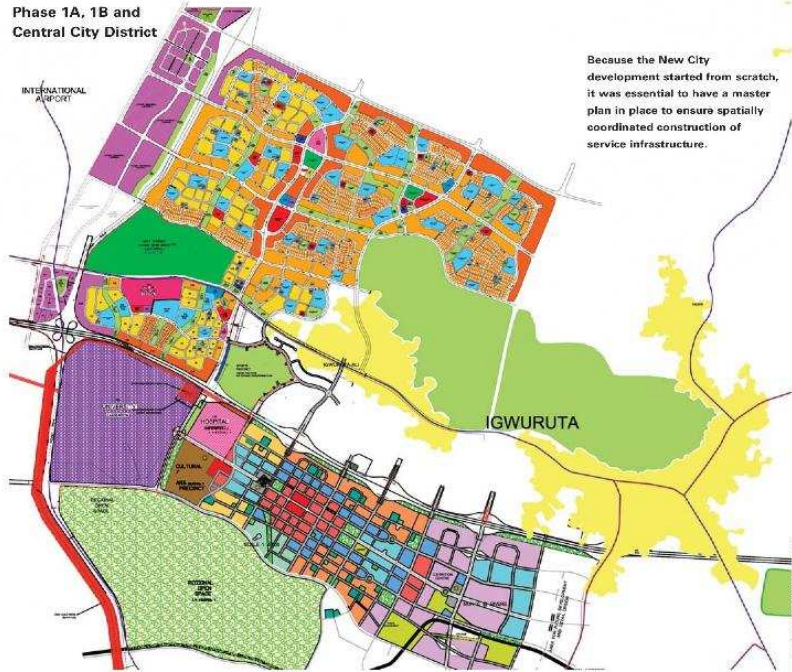
**The master plan for the overpopulated Port Harcourt incorporates a new city which has been designed to provide new opportunities for the population and, simultaneously, remedy what is wrong with the old city.**

By Jason Boswell

#### Old City



Phase 1A, 1B and  
 Central City District



## 1. New City

The new city aims to remedy the overcrowding of streets, and the lack of open spaces and community facilities and structures while conserving the natural features of the area.

The development of the new city along with the adjacent existing Port Harcourt International Airport forms the first anchor and it will be linked to the redevelopment of the old city as well as Onne Port, Ryno van Wyk, technical coordinator for Arcus Gibb in Port Harcourt, says. Because this development had to be started from scratch, it was essential to have a master plan in place to ensure spatially coordinated construction of service infrastructure, adds Van Wyk. Tender invitations for the construction of these emergency services –

installation of sewerage and water reticulation networks, roads and freeways, and electrical reticulation – went out in September 2010 and are pending authorisation.

Phase 1 of the project consists of a greenfields project of 1 692 ha which is expected to contain over 30 000 residential units. This monumental project will not be done at once as Phase 1 has been divided into four separate phases: 1A, 1B, 1C and 1D.

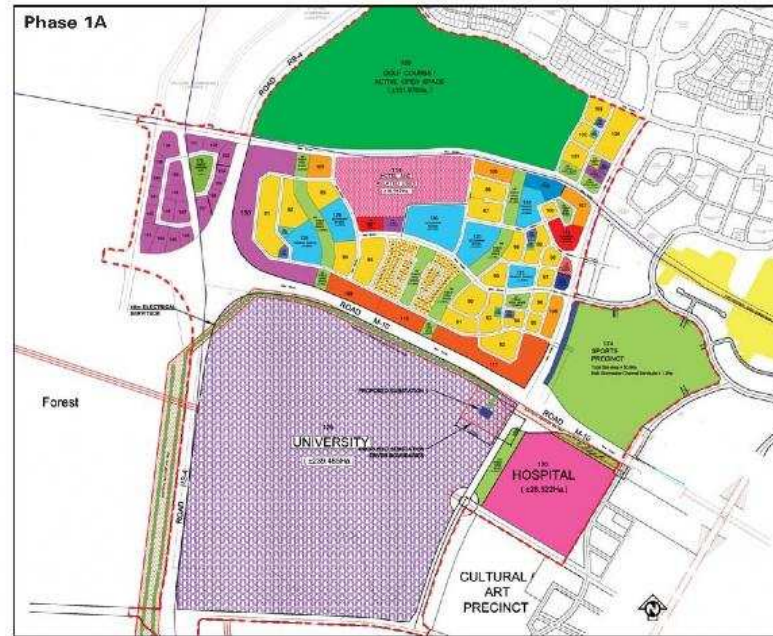
According to Cooney-Gam, the 685 ha Phase 1A will consist of just

over 3 000 housing units with an overall budget of about US\$730-million, including the construction of an emergency service.

Located adjacent to the Port Harcourt International Airport Hotel, Phase 1A will comprise, primarily, private neighbourhoods and mixed-use complexes.

Cooney-Gam says subsequent phases will all follow similar patterns. Construction of Phase 1A is expected to last approximately two years and the entire Phase 1 is expected to be completed by 2026.

Phase 1A



Phase 1A will comprise mainly private neighbourhoods and mixed-use complexes.



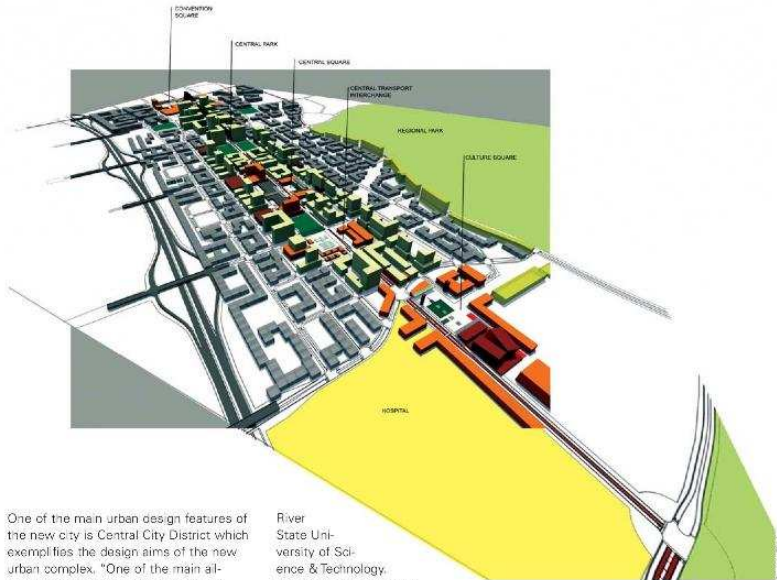
# Urban Green File

## April 2011

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## 1a) Central City District



One of the main urban design features of the new city is Central City District which exemplifies the design aims of the new urban complex. "One of the main ailments of the old city was a complete lack of community facilities or structures," says Kriek. He notes that the lack of municipal management over the past three decades created an environment where there was no structured shopping or provision of health services and streets were overcrowded, and there was a complete lack of open spaces because of the overcrowding situation. "At the moment in the old city, about 90% of the streets are lined with tiny shops about 10 m<sup>2</sup> in size and traffic congestion is absolutely terrible," Kriek adds. Central City District is designed to provide more structural development over time.

Kriek states that several key catalytic structures are designed along a central spine and the urban areas will be encouraged to develop between these new modern structures. Some of the key projects already under way in this precinct include a 1 000-bed hospital as well as a 50,8 ha sports precinct which will be home to a 25 000-seater stadium and a smaller 5 000-seater stadium, as well as accommodation for athletes and a variety of smaller sports venues. In addition, the precinct will host the new home of the

River State University of Science & Technology. Services are now under construction for this new 212 ha facility.

On the opposite end of the catalytic business boulevard Monte at Rivers, an entertainment centre similar to the Montecasino complex in Johannesburg has been placed. This structure is in an advanced stage of planning. According to Kriek, the main focus of this complex will not be gambling but entertainment facilities such as a large shopping complex, an outdoor entertainment area and hotels. Van Wyk estimates the size of this new project, which is in an advanced conceptual stage, will be in the region of 30 ha.

A new convention centre is planned to be located directly opposite the entertainment centre. Cookcoy-Gam states that Nigerian representatives have been looking at convention centres in South Africa, as in Durban and Cape Town, for designs which will fit with the aesthetics of the new city.

In terms of sustainable and "green" design, all attempts are being made to establish sound environmental principles in all aspects of the planning and the design of the new city.

**Several key catalytic structures are designed along a central spine and the urban areas will be encouraged to develop between these new modern structures.**

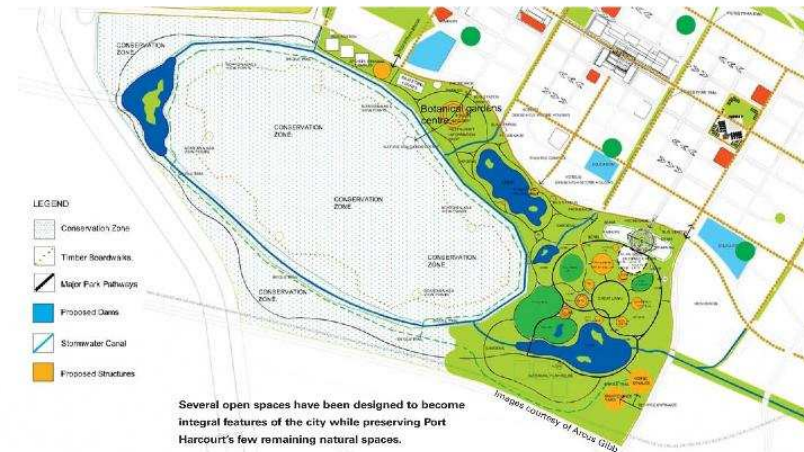
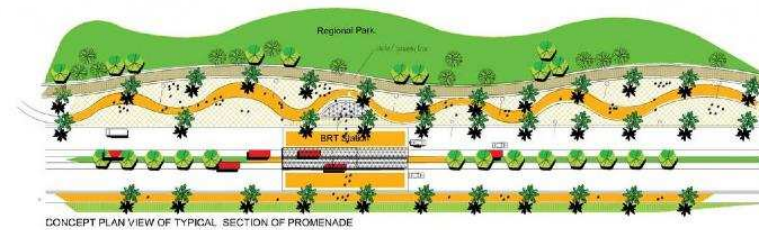
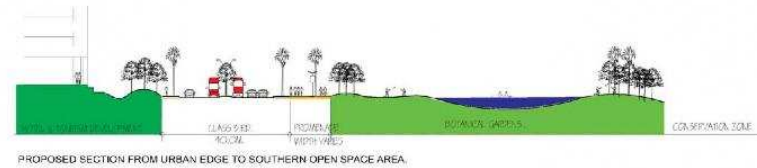
It should be noted that environmental aesthetics differ in the context of Port Harcourt. The initial designs of city elements, such as the convention centre and specific urban landmarks, are at conceptual stage and do not yet detail the "green" principles, such as solar-energy utilisation and water conservation, which will be integrated into the final designs of these elements.

In order to reduce traffic, the central boulevard will consist of wider streets than those found in the old city, a traffic control system will be introduced and a BRT system is planned for the area, Kriek points out.

The design of Central City District includes numerous open spaces and parks for the community. While the smaller spaces will provide recreational facilities, Arcus Gibb has some grander plans for one of the larger open spaces:

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## 1b) Promenades and preservation



**Several open spaces have been designed to become integral features of the city while preserving Port Harcourt's few remaining natural spaces.**

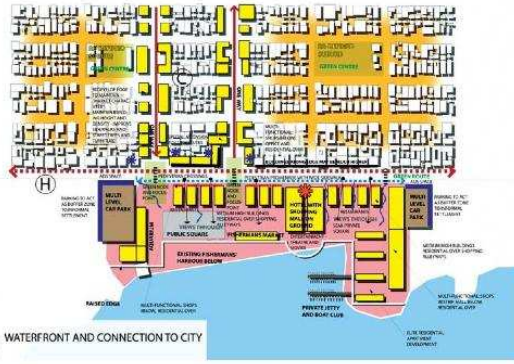
Several natural low-lying "bowls" are scattered through the design of the new urban complex, Kriek notes, adding that directly adjacent to Central City District lies one of these bowls which is approximately 200 ha in size. "It is important to conserve the natural features of the areas in and around the new city. Many of these spaces are covered by informal housing of some description. We have had the landscaping design knit this open space into the city and have designed a

wide boulevard which will include a pedestrian promenade of varying width as an interface between this natural area and the city." The design expanded the size of the 200 ha bowl to ensure that the wetland within the bowl remained protected and that the expansions would also create a buffer zone to interface with the promenade, Kriek adds.

In addition, there are several similar open spaces, of similar size, which have been designed to become integral

features of the city while preserving Port Harcourt's few remaining natural spaces, Kriek notes.

There is concern about a large open area along one of the rivers on the north-east border of the urban complex which is included in the master plan as a conservation area, he adds. Kriek says that steps need to be taken quickly to ensure informal housing does not expand into this area and engulf the waterfront property as in the old city.



Set to remain the government precinct, the old city's rehabilitation will include a waterfront promenade, pedestrian walkways and public squares.

## 2. Old City

The inclusion of the old city as part of the new urban complex was a key priority for the design team, states Kriek. He says that there is a strong rehabilitation design for the old city which will house the government precinct as it did previously. According to the design, a sports precinct will also be redeveloped in conjunction with a shopping centre.

In addition to the rehabilitation plans for the government precinct, several new urban-design features, including a waterfront promenade with pedestrian walkways as well as new public squares, have been included in the new design for the old city. These designs would require that the waterfront area be cleared to make way for

these new developments. Urban-renewal strategies in the government precinct and the old town include an improved open-space system which is knitted into the existing urban complex, re-establishing green pockets in densely populated areas. Retail and commercial development opportunities will be formalised and structured to encourage sustainable economic-activity patterns, and to create catalytic development and investment opportunities. A major component of the government precinct and old town revitalisation is the acknowledgment and emphasis on celebrating cultural and historic features, as well as patronage throughout these precincts through design and innovative planning.



## Challenges posed

While all parties involved with the project remain confident that it will succeed, there are definitely a number of real challenges facing its development and planning. Among these are the fact that, located in the heart of the Niger Delta, the area presents some difficult environmental challenges.

Another challenge was the design of the stormwater and sewerage systems. Kriek says that, despite the fact that the distance from the New City development and the international airport to the old city is about 40 km, the fall in ground over this distance is only 20 m. This extremely flat terrain presented challenges in designing the city's new stormwater and sewerage systems. The decision was, therefore, made to design the stormwater system above ground. Kriek says that this decision was reached for a number of reasons. "Firstly, by keeping the system above ground, construction costs were reduced."

Management of the stormwater system was also taken into consideration. Kriek notes that the water-design team travelled to the Netherlands to learn from its experience. "The idea emerging from this visit is that it is far easier to manage a stormwater system

where it flows rather than where you want it to flow," Kriek imparts. Ease of maintenance was also a driver in designing the stormwater system above ground. Management of the new development may also prove to be challenging to designers, Kriek notes. "We are in the process of designing a detailed land-use management system as a tool for the GPHCDA to use in future. At the moment, there are no official zoning regulations so there is no guarantee that, if you put up a shopping centre today, there won't be an abattoir next door tomorrow." Kriek states that the land-use management design should be implemented by the end of 2011 and the city's zoning will be allocated according to Arcus Gibb's design.

The population growth, current and historic, also poses challenges for the design team. "We have already seen encroachment of informal housing around the new Onne Port," Kriek notes, adding that it has proposed that a government building is relocated and built adjacent to the port in order to curb further urban sprawl and challenges in relocating people to accommodate future designs.

In addition, the historic population growth has seen the waterfront effectively blocked off from the old city. Kriek states that the relocation of these people, which may involve hundreds of thousands, in order to facilitate the rehabilitation designs is going to pose challenges. Further, according to Kriek, the area's difficult building conditions due to high rainfall will impact strongly on future planning.

There is no doubt that the design and planning of what the governor for River State, Rotimi Amaechi, called "a new world-class city" will be challenging. Having to design a new city from the ground up, including basic services and transport systems, poses significant challenges. However, Kriek says there has been good cooperation between the various players involved in the design and planning, and the groundwork has been set for a possible success story in the Niger Delta. Still in the early stages, it will be interesting to watch developments as they occur and see what lessons this future "world-class city" will teach designers and planners across the continent. ■

