

The case for sustainable real estate development

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Ghana is growing rapidly; the country is following the global trend of rapid urbanization where every hour, thousands of women, men and children move from the countryside to the city. In 1900, only 10% of the global population lived in cities, by 2007 half of the world's population did and it is projected that by 2050, the world's cities will be home for 75% of the World's population.

With this comes tremendous growth, development and living standard improvement opportunities, but also huge threats. Every year, fast growing cities such as Accra need thousands of new homes, new offices, new shopping centers, new leisure amenities, new churches and mosques.

In a city like Accra temperatures can be up to 3° Celsius warmer during the day and 12° warmer during the night than in the countryside. The building sector is the single largest contributor to global greenhouse gas emissions (GHG), with approximately one third of global energy end use taking place within buildings. Further, the construction sector is responsible for more than a third of global resource consumption, including 12% of all fresh water use, and significantly contributes to the generation of solid waste, estimated at 40% of the total volume. As Accra, Kumasi and Takoradi develop, and their populations increase, water supply, sewage systems, transport infrastructure and energy grids as well as the environment in general will be put to test. This represents possibly the largest threat brought by this fast urbanization trend on the natural environment.

So what shall we do? Are buildings really that bad? Shall we stop building new homes and offices? Is real estate development truly incompatible with the preservation of the natural environment and the Planet at large?

The answer is no. The social and economic development of Ghana depends on its ability to develop its cities and leverage the synergies derived from urban living. As humans, we have always built buildings and we always will. So the real issue is not whether to develop new buildings, but how to develop them. I believe that environmentally sustainable, green buildings are the only way forward for Ghana's real estate industry. If we don't build sustainably we are not truly building for the future.

What is a green or



environmentally sustainable building?

A sustainable building is designed to have the lowest possible impact on its surroundings and natural environment during its entire life cycle: from planning, to construction and in its everyday use. Good green design starts from the building positioning on the site which should follow the sun's path to maximize its positive effects (natural lighting) while minimizing the negatives (heat gain). A sustainable building should, for example, harvest rain water and use motor sensors on water taps and toilets to minimize the use of water from the water grid; use natural ventilation and shade the façade from direct sunlight to minimize air conditioning needs; use automatic presence detectors to control lighting to reduce electricity consumption; use trees and landscaping to limit soil erosion and encourage birds and other wildlife. The materials used during construction should be from sustainable sources: non-toxic, renewable, recycled or reclaimed. A sustainable building works in harmony with its environment and users: this is particularly important in a location such as Ghana where a building must respond to our hot and humid climate.

However, let's not forget that a building is also where most of us spend 90% of our time on average and that pollutants could be five times higher indoors than in the outdoor environment. In many residential buildings in Ghana, poor ventilation coupled with indoor pollution from poorly combusted fuels (from taxis and trotros, open air refuse burning sites etc.) pose severe health risks, helping to spread deadly infections such as tuberculosis and pneumonia. Indoor pollutants in offices and houses have been

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proven to be the cause of cancer and asthma among other conditions, so a good green building is also a building where the quality of internal air and materials is the highest.

Does developing green buildings make economic sense?

Developing environmentally sustainable buildings makes common sense as it will help to mitigate the impact of growing cities on the environment and will help us stay healthier and live longer. But does it make economic sense?

Many developers in Ghana and around the World maintain that developing green buildings is too expensive and does not make economic sense. Common industry belief is that most emerging real estate markets are not ready for sustainable building practices. I argue that countries

like Ghana face a unique opportunity: significant new construction is expected in the next ten to twenty years. Urbanization and economic growth in the Country also point to the rapid growth of new building stock. In Ghana, taking into account sustainable building considerations at the time of design and construction makes good economic sense. Green retro-fitting at a later stage, as is now done in the US and Europe, would carry higher costs, both financially and environmentally, than integrating sustainability considerations at the early stages of design and construction. The time to go green is now.

But there is more: a recent research by the US Green Building Council,

University of San Diego and CB Richard Ellis Group has proven that there are 2.88 fewer sick days in green office versus non green office, translating into \$5.00 saving per square foot per year. This is based on an average tenant salary, an office space of 250 square feet per worker and 250 workdays a year. The increase in productivity in green buildings translates into a net impact of about \$20 per square foot per year.

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within the first 7 years of the building's life through reduction in operating costs. McKinsey estimates that in developing countries, investing US\$90 billion in energy efficiency buildings, would reduce energy expenditure by US\$600 billion (McKinsey 2010), that it GHS 66 saved in electricity bills for each GHS 10 of investment. If green buildings practices are adopted now, savings in the future on energy and other utility costs will be substantial.

Finally, sustainable real estate development in Ghana can lead to job creation. If green buildings are adopted on a wide scale, they can open up completely new industries. For example, as solar energy or water conservation becomes more common, more and more companies will start producing solar panels and water conservation systems locally. This would provide an opportunity to engage the informal sector by training people with the skills required for these industries. Adopting a green buildings industry now will launch Ghana as a leader in sustainable building technologies in West Africa, perhaps, even in Africa.

The One Airport Square project

At Actis and Laurus Development Partners, we believe that sustainable real estate development is the way forward for Ghana.

True to our beliefs and to the beliefs of the investor, Actis, we have conceived our newest development One Airport Square to be the first certified sustainable commercial and retail complex in Ghana. The nine floor office complex is designed to fuse Ghanaian traditions with pioneering green solutions. Construction begins in October and the development will champion green features like the use of natural ventilation and natural lighting via a central atrium, rain water recycling and concrete overhangs to prevent overheating and to allow for a 25% reduction in energy consumption compared to the average office building in Accra. High fresh air recycling will guarantee indoor air quality and the building's health and safety features will comply with international standards. The entire site is surrounded by landscaping and trees with a central public piazza to encourage informal meetings and community events such as concerts and local art exhibitions.

Our hope is that One Airport Square will set a trend which will be followed by other developers in the country. Making Ghana's building industry sustainable will not just benefit the environment, but will benefit developers, investors and indeed Ghana as a whole.