



ERA ARCHITECTS cc.

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KEN STUCKE'S ERA ARCHITECTS

ERA Architects is a vibrant and experienced architectural practice providing specialist expertise on environmental projects, green architecture and sustainable development. ERA Architects was founded in early 2001 by Ken Stucke; the sole director.

ERA Architects was the design architect for a low-energy office development in Lusaka, (value US\$20m), and is the project architect for the Johannesburg Eco-City project in Ivory Park where phase 1 has been completed.

ERA Architects was the environmental and low-energy specialist in several other projects, including the winning proposal for the Department of Trade and Industry (DTI) new campus in Pretoria.

ERA Architects looks forward to the adoption of sustainable issues within mainstream development practice in Southern Africa, and is well placed to provide the required specialist input. Already the frequency of such projects is seen to be increasing, with the South African Government beginning to address such issues in all major projects. ERA Architects services are found to be more requested as these developments continue and Southern Africa begins to adopt the same environmental concerns that have dominated Europe for many years now.

- Ken Stucke is a specialist 'green' architecture consultant to other architects, working with them at the earliest possible stage, developing concept designs that integrate a host of environmental issues into the fabric of the building and project. These are mostly large projects.
 - Pyramid Plaza in Lusaka
 - Department of Trade & Industry Travena Campus in Tswane
 - Department of Foreign Affairs, also in Tswane.

ERA Architects Design & Build cc. is a subsidiary company of ERA Architects (Pty) Ltd. ERA Architects Design & Build cc. was founded in early 2003 by Ken Stucke; the sole member. The company specializes in building small residential and community construction projects around the northern suburbs of Johannesburg, concentrating on only a few projects at any one time.

The projects are designed to maximize the amenity value of the natural Highveld climate, and to give the users the best opportunities to enjoy our natural environment, while remaining simple and robust in essence.

These are design intensive projects where the focus is on the quality of construction detailing. They demonstrate Ken's concern to bring the, fast disappearing, artisan's skills and 'crafted' quality of workmanship back to the construction industry in South Africa. Great attention is given to the design and completion of both technical and aesthetic details.

- The residential projects are often major re-inventions of the original footprint, fully adapted to suit the new owner's lifestyle and amenity requirements.
- Many of the Design & Build projects are specialized design intensive installations, such as built-in bunk beds, covered patios... even a "crow's nest" launch pad for an abseil slide.
- There is also a small steel and timber furniture making concern that keeps the more skilled artisans busy when they are not making special details for the small buildings.

KEN STUCKE - PRACTICING ARCHITECT

Ken Stucke is a practicing architect registered with the South African Council for Architects. For more than ten years, he has focused his architectural work on green architecture and sustainable development, and now practices full time in this idiom.

After some early training in Permaculture, cob building and other green principles in the UK in the late 80's, he went on to be involved in a great variety of environmental projects.

These include;

- self-build projects
- eco-tourism
- innovative building solutions involving recycling transport containers
- National Botanical Gardens
- low-energy buildings
- appropriate technology buildings
- research & development institutions involved in sustainable development
- poverty alleviation projects

Ken has, from time to time, acted as a builder in various projects and countries, ranging from France and England to Botswana and South Africa. This length and breadth of experience has provided him with a firm grasp of the environmental and technological issues at work in the construction industry.

Ken was the project manager for the Botswana Technology Centre new headquarters (BOTEC) in Gaborone, during construction and commissioning. This was an experimental building involving some innovative new technologies. Ken is also a lecturer in the subject of Construction at Wits University School of Architecture. "This keeps me excited about my field, and helps to maintain my enthusiasm. I employ my students in my office during their practical year of training, this drives me nuts." – Ken Stucke

Ken has been asked to be part of several expert critique panels and workshops, asked to review the design proposals or establish project briefs. These include the Greenhouse Project in Johannesburg; a high profile project with government and municipal backing as part of the drive to revive the city center, and the CSIR's Centre for Alternative Technology project in Pretoria.

Ken has published papers in technical journals, including *The New Headquarters for Low-energy Building Design in a Hot Dry Climate*, (Ken Stucke & Rik Leus. Botswana Journal of

Technology Vol. 10 No. 1 April 2001), and contributed to articles in various publications; including Urban Green File & Enviropaedia. He has also presented various papers at conferences over the years, including the ISES Solar Academy in Johannesburg 2002, and the Demand Side Management Impact conference in Pretoria 2002.

Ken was recently sponsored by SIDA, the Swedish aid agency, to assist in a training course in Sweden focusing on furthering professional expertise in low-energy buildings and thermal simulation software; Dynamic Energy Response Of Buildings (DEROB).

GREEN ARCHITECTURE - BY KEN STUCKE

It has been estimated that 50% of the world's energy is used in the production and servicing of buildings. Through Carbon Dioxide and CFC emissions, buildings may be responsible for up to 32% of global warming. Enormous quantities of non-renewable resources and water are consumed in the production of modern buildings. Most architecture is oblivious to these facts and their consequences, and only attempts to address the issues of cost, function, aesthetics, and construction. Green architecture takes a much broader view, and attempts to address the issues of resource depletion, environmental degradation, pollution and social imbalance. It encompasses the three pillars of sustainable development; social, economic and environmental sustainability.

Green architecture has intrinsic in its philosophy the notion of a caring social ideology in the design process. The site is considered more than a place to build the project, but rather its geology, geography and ecology are a resource with which the architecture synthesizes to produce built form. Climate is most often an opportunity for synergy to produce comfortable internal and external environments with much less energy expenditure than in traditional architecture. This is particularly true in areas such as Southern Africa with its temperate climate. It is recognized that any development that is not economically sustainable is an even greater waste of precious resources than traditional architecture, and therefore green architecture has to work within the current financial systems, while still producing less environmental impact than its traditional counterpart.

In the language of the building industry, the building is broken down into separate elements; wall, roof, floor etc. There is little mention of the interaction between these elements, and how they perform as a whole. Green architecture represents a holistic approach, where the building is considered as a whole; an organism or machine, in which every component has an effect upon the other components and on the building as a whole. Working in this way, it is possible to have single elements performing several functions, producing more resource efficient buildings.

KEN STUCKE - HISTORY

Ken's grandfather began one of the first architectural practices in the RSA; the firm still exists today, and is still called Stucke Harrison. Born in the RSA, Ken Stucke left as a young child to grow up in Malaysia, England and France. As a 14 year old, he started renovating a 600 year old stone farmhouse in the south of France, with his family during the long summer holidays. Architecture was the perfect match between Ken's mathematical and artistic strengths.

He returned to the RSA, aged 18, to study architecture at Wits. This was a very strange experience, as he knew nothing of apartheid, politics or RSA. After 4 years of study he extended his 'practical year' to seven years working in Botswana, Cape Town, London and France. From building tourist camps in the Okavango to large sophisticated office blocks to renovating ancient stone houses as a stonemason; he tried to experience the broadest

understanding of architecture from all perspectives.

He finally returned to complete his studies as a 'mature student'. He was involved in his own development ventures and had his first child during this time. He received a BArch and completed the first completely 'Green' architectural thesis at Wits. He had, by now, made environmental architecture his passion.

KEN STUCKE - FAVOURITE PROJECTS

“ My favourite projects so far would probably be the two in Parkview and Dunkeld.

The pre-primary school in Dunkeld is a very cost effective building with simple robust finishes, but with a very delicate and sensitive feel to it. The building uses Eucalyptus 'latte' (sticks) to create balustrades and shading screens. These screens undulate along the facade according to the sun's movement and window positions. They combine to form something of a skirt. At times the skirt drops right down to the ground, creating the feeling of protection and security for the young school children as they can 'hold on to the building's skirt', as they would hold onto their mother's skirt. The building also teaches about shapes and order, as both structure and decoration are often displayed in a very romantic way. The intention was to create a building that is exciting but not at all intimidating to the little children, and a building that teaches them about shapes, logic and load paths without their even being aware of the subtle messages.

On the residential alteration in Parkview, I was working with two clients with whom I have a good affinity in terms of the 'look' that we were going for. I am naturally eclectic, and they seem to enjoy that. We achieved a very hand-made feel to the finishes, with more crafts being evident than in most houses. The feel is quite industrial, with materials being expressed as they are. The design has been very successful in the living areas, with a fantastic feeling of space and freedom created in the house, yet realised with a great deal of elegance.”

- KEN STUCKE