

Awarded Projects in the AfriSam-SAIA Award for Sustainable Architecture + Innovation Announced

Seven Awards and four Commended projects were announced in the 2015/2016 AfriSam-SAIA Award for Sustainable Architecture + Innovation at the gala event in Cape Town tonight.

The eleven projects chosen by the award adjudicators were among a total of 22 final qualifying entries that had been selected from a record number of eligible submissions earlier this year.

“The Awarded and Commended projects amply demonstrate the three main criteria that the adjudicating panel was looking at;- regeneration, reconciliation and restoration,” commented Richard Tomes from AfriSam. “These projects all make the world a better place by minimising their impact on the environment. They also bear the hallmarks of great architectural and social design. Together they represent the very best in sustainable architecture and innovation.”

The increasing importance of sustainable and innovative design practice in the South African built environment was confirmed across all four categories of the 2015/2016 AfriSam-SAIA Award for Sustainable Architecture + Innovation.

Category A - Sustainable Architecture, saw three Awarded projects – the *DEA Building* by Boogertman+Partners Architects, *Gorgeous Green House* by Sagnelli Associate Architects and *Oudebosch Camp Kogelberg* by Architecture Coop. These were joined by four Commended projects - Earthworld Architects' *iCat Eco Factory*, Local Studio's *Outreach Foundation Community Centre*, Daffonchio & Associate Architects' *Maboneng Precinct* and *WWF SA Braamfontein* by Alive Architecture.

Category B - The Award for Research in Sustainability went to *Designing Hope for Pathways to Regenerative Sustainability*, a book by Chrisna Du Plessis while Paul Marais' *Otto Cottage* was Awarded in the Sustainable Product/Technology category (Category C).

Finally there were two Awarded Projects in Category D - Sustainable Social Programme - buildCollectiveNPO with Carinthia University of Applied Science's *Bridging Mzamba* and Architecture for a Change's *Malawi School*.

The 2015/2016 AfriSam-SAIA Award for Sustainable Architecture + Innovation took place in a unique space adjacent to the Zeitz Museum of Contemporary Art Africa, a project supported by AfriSam. It was attended by representatives of the most compelling architectural practices, construction companies, social businesses and thought-leaders in the country.

"The awards are a resounding endorsement of sustainable and innovative design practice in the South African built environment, said Kevin Bingham, Awards Convenor and SAIA Vice-President. "We have entered a new era in which sustainable design is becoming a non-negotiable, integral part of the building industry. Alongside significantly impacting the lives of those who use them, the Awarded and Commended projects provide fantastic inspiration for Architects – and indeed everyone playing a part in our built environment."

The adjudicators of the 2015/2016 AfriSam-SAIA Award for Sustainable Architecture + Innovation were Kevin Bingham (convener), Daniel Irurah, Llewellyn van Wyk, Sebastian Badenhorst, Eric Noir and Richard Stretton.

CATEGORY A: SUSTAINABLE ARCHITECTURE

- 1) DEA Building (Pretoria, Gauteng) - **AWARDED**
Boogertman+Partners Architects

The award to the Department of Environmental Affairs in the City of Tshwane, is based on the importance of a structure which reflects the culture of the Department, the way it works and functions and what they stand for in terms of purpose, beliefs and service to the country and the community. The project also boasts a 6 star green office v1 design rating. The design responds to an environmentally sensitive and sustainable architecture that is equally respected by international dignitaries, visitors and tourists but above all is a home for the Department to be proud of and to remain memorable and inspiring for generations to come. The land parcel shape, orientation and topography provided the opportunity to link a series of large, effective office wings along a North - South central spine, enabling the building to centralise the support services along the spine and to keep the floor plates as open and multifunctional as possible. The orientation of the wings allowed for green spaces between the wings as well as allowing sunlight into the wings. The building hosts an array of sustainable technologies from; rainwater

and greywater harvesting and recycling to double glazed windows, evaporative cooling methods for air conditioning, photovoltaic cells, solar hot water heating on the rooftop, east/west orientation and a highly developed building envelope insulation design.

- 2) Gorgeous Green House (Durban, KwaZulu Natal) - **AWARDED**
 Sagnelli Associate Architects

A Client driven green research project, The Gorgeous Green House encapsulates all green and eco gadgetry there is within the market. This project shows just how strong the Client's voice was with decision making on a sustainable level. Special thought, consideration and research by the Client allowed the design of the house to incorporate many sustainable features from rooftop gardens, green walls, evaporative cooling ponds, water harvesting, storage and recycling, and solar energy, to name a few. The property also incorporates sustainable and environmentally friendly materials from bamboo, recycled carpets and kitchen countertops. It also boasts an incredibly integrated eco-system of bee hives, kitchens, veggie garden and a natural swimming pool with fish, all of which attract over 40 species of birds, insects and wildlife to the property. This house is the 'poster-child' for sustainable green living.

- 3) Oudebosch Camp Kogelberg (Kogelberg Biosphere Reserve, Western Cape) -
 AWARDED
 Architecture Coop

Kogelberg is tucked away in the mountains above Betty's Bay, within a protected wilderness area in the Kogelberg Biosphere, a UNESCO World Heritage Site. This breathtaking biodiversity hotspot is of extremely high conservation value. It is known as the "Heart of the Fynbos". A rugged and ancient landscape, a wilderness of jagged, folded mountain peaks which cradles streams and rivers with wetlands that criss-cross the faulted landscape creating a myriad of habitats for the 1650 fynbos species. A careful path to crafting a sustainable, environmentally responsive and low impact strategy for settlement evolved which was nurtured by the think tank multi-disciplinary team that mined and mapped, unravelled, uncovered and unpicked the secrets of the site ecology. Thus began a 'hands on' iterative journey to build a vision and grow the buildings from the seeds of understanding the site. The buildings are modestly scaled, lightweight, stilted, basket like, with planted roofs set on banded stone bases. These simple structured shelters reflect the natural qualities of the landscape. Hovering decks, terraced ground and large slide-away openings allow spaces to grasp and touch the mountainscape lightly. The palette of natural, local, renewable, low embodied energy, non toxic materials and components develops the low impact sustainable qualities of the project. Low tech simple passive design principles underpin the crafting of the building envelope which is shaped for the shifting seasons. Open structures breath crisp mountain air and bask in natural light.

- 4) iCat Eco Factory (Pretoria, Gauteng) - **COMMENDED**
 Earthworld Architects

Sustainable design begins long before the first foundation is cast or brick is laid. It begins in the symbiosis between the visions of the Client and the Architect. This was the case for the iCat Eco Factory. The programme was focused on housing both the administrative, as well as production functions of the company, merging the corporate headquarters with the warehouse space allowing for an environmentally sustainable structure. This served to further minimise travel distance and as a duplication of costs, buildings, footprint and staff as well as other assets created through running multiple functions simultaneously. The design was greatly influenced by seasonal changes in lighting and climate, meaning that every facade of the building responded accordingly. An equilibrium was struck between natural and artificial light, while minimising the latter. The site lent itself well to this approach, allowing the warehouse to shade the offices from the direct western sun, a southern courtyard to serve as a social activation space and the northern facade to allow for lighting into the offices and warehouse, as well as heating during winter months. From the roof, much of the building's water and energy requirements are provided for through rainwater and solar energy harvesting. There is an array of PV Panels along with a 40 000ℓ water harvesting tank buried below the courtyard. These systems were implemented to make a difference both ecologically and economically.

5) Maboneng Precinct (Johannesburg, Gauteng) - **COMMENDED**
Daffonchio & Associate Architects

The Maboneng Precinct (meaning “place of light” in Sotho) is an open, mixed–use neighbourhood and a unique case of vast urban regeneration produced by one Developer and one Architect. This historic district in Johannesburg is a unique complex of developments that collectively underpin the city centre’s exciting regeneration resulting from both global inspiration and local innovation. These include studios, art galleries and a range of shops, restaurants and coffee bars that are fueling an inner-city lifestyle, with entrepreneurship and creativity at its core. The broad spectrum of different sized spaces attempts to create a precinct that is inclusionary whilst maximising the financial viability of the development as a whole.

6) Outreach Foundation Community Centre (Johannesburg, Gauteng) - **COMMENDED**
Local Studio

The Outreach Foundation Community Centre is one of the first new inner-city social infrastructure projects to be built in Hillbrow since the 1970’s. The building site is situated on the rooftop of the unfinished community hall of the German Consulate from the 1970’s. The building houses three primary functions: a computer centre, a dance studio, offices and meeting areas. These functions are collected within an angular volume draped over the two levels of the site. The simple form of the community centre is entirely governed by the programs housed, the choice of white 'Chromadek' corrugated steel and clear corrugated polycarbonate as cladding materials abstract the buildings image and clearly establish the building as a new addition to this part of the city. The building is elevated almost two stories above the street level which creates strategies around public placemaking.

7) WWF SA Braamfontein (Braamfontein, Gauteng) - **COMMENDED**

Alive Architecture

The WWF building in Braamfontein, the first 6-Star GBCSA Design Rating on a brownfields site in South Africa, was a restorative project in a heritage building dating back to 1905. The primary focus of the design of the building was centered on the maximisation of the site parameters whilst recycling most of the existing materials within the site and showcasing the raw aspects of the original building by leaving selected walls unfinished in the original brickwork.

The building, which enforces the WWF sustainable ethos, seriously implements green technologies. Features of the building include a wastewater treatment plant, water harvesting, natural ventilation to all office areas with additional forced air changes and no air-conditioning, double glazed fenestration, automated blinds and LED lighting linked to a building management system. It also features a solar geyser for the shower and kitchen areas, reclaimed/re-used materials for building and furniture items, the inclusion of bicycle racks, the exposure of base materials to allow for building thermal activation and the use of recycled materials for the construction of the concrete slabs within the building.

CATEGORY B: RESEARCH IN SUSTAINABILITY

- 8) Designing Hope for Pathways to Regenerative Sustainability - **AWARDED**
Chrisna Du Plessis

"Designing for Hope represents a timely, important and necessary contribution to the literature that provides a powerful characterization of current and alternative world views. It also offers a comprehensive coverage of the scope and emphasis of regenerative sustainability. Maintaining both a measure of criticality toward the nature of an impending set of environmental difficulties that must be navigated and yet offering a positive, hopeful message and perspective again is not an easy task. Hes and du Plessis have provided us with a positive and constructive path forward." Raymond Cole, Building Research & Information.

This publication is the result of a research collaboration between the University of Pretoria and University of Melbourne with the aim of bringing together the theory and practice of an emerging regenerative design and development paradigm. It captures the learning from an extensive literature review and over 50 interviews with practitioners and academics from across the world to present a number of theoretical approaches, supported by case studies, that describe working from an ecological paradigm in the built environment.

CATEGORY C: SUSTAINABLE PRODUCT / TECHNOLOGY

- 9) Otto Cottage (Maun, Botswana) - **AWARDED**
Paul Marais

This is a small house in Maun, Botswana, made of natural materials comprising rammed earth, timber and locally harvested reeds, demonstrating what can be achieved with natural materials in harmony with the environment, while being beautifully seductive. By using forms similar to those prevalent in the area, it draws a deliberate link to them and, by reinventing traditional

building materials, it points to a sustainable future building technology. The project minimised its impact both in its construction with the extensive use of local and natural materials, and its ecological approach to its use being energy, water and waste neutral. It used local site earth for the rammed earth - the house is not connected to either the local electricity grid or the municipal water and sewerage systems, making it 100% off the grid. The entire construction and implementation of green technologies was done with the transfer of knowledge from the architect to the local team of builders. Emphasis was achieved by training the unskilled labourers within specific trades as well as the installation and construction phases of the rammed earth, solar installation, biological sewerage and water purification and permaculture of the site.

CATEGORY D: SUSTAINABLE SOCIAL PROGRAMME

- 10) Bridgingmzamba (Mbizana, Eastern Cape) - **AWARDED**
buildCollectiveNPO with Carinthia University of Applied Science

The community driven project, 'bridgingMzamba', originated in the urgent need of and requests by surrounding inhabitants for a safe crossing of the Mzamba River. This included the design and implementation of a 140 meter long suspension bridge in a collaborative manner. Design and technology were guided by the reduction of environmental impact, available resources, the use of laypersons and the fact that the construction site was difficult to access. The Mzamba Bridge is now connecting residents of a catchment area of approximately 30km to necessary infrastructure such as educational facilities, health care, jobs and general food supplies. Further, it serves as a landmark and potential tourist attraction in the area to enable socio-economic development.

- 11) Malawi School (Mchinji, Malawi) - **AWARDED**
Architecture for a Change

The design explores the possibility of the School as a covered canopy. It offers a larger covered area that provides shade, open, well-lit and ventilated spaces and becomes a visual icon for the community. Shade netting, lightweight steel, local masonry and corrugated iron form the architectural language of the building. The masonry, handmade by local woman on the site, is used to create brise soleil on the exterior of the classrooms to act as shading devices and structural support for the roof. The use of refurbished shipping containers, implemented for their structural stability, have a dual function. Firstly they are transportable elements, and secondly, they are used as a shell and anchor for the new structures. By utilizing locally manufactured materials, it provided the community with a sense of ownership and allows for the integration of the container as a foreign contextual element. The function of the building is not limited to a school but doubles as a community gathering space where local events are held and revenue is made, allowing the school to sustain itself economically.

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