



First designs  
booklet

# #TIMBERCOMPETITION SA

COMPETITION FOR YOUNG SOUTH AFRICAN ARCHITECTS





Young South African Architects were invited to design a conceptual draft of a timber structure home for a South African family with three kids. No restrictions as to the size of the plot or budget and it is purely at the discretion of the author what is seen as requirements of the family members.

The objective of the Competition is to broaden a general interest in modern sustainable construction and offer young architects an opportunity to explore amiable housing design with environmentally friendly impact of the future. At the same time the Competition should open innovative construction concepts to the South African public, namely young families.

The Competition is organized and sponsored by the Wood Student Foundation and HWZ International South Africa (in cooperation with the Hout Bay House research project members). This provides the Competition participants direct access to innovative sustainable building materials & concepts, e.g. cross laminated timber (CLT).

[www.timber-competition.co.za](http://www.timber-competition.co.za)

@timber.competition

#timbercompetitionsa





## MODERN, INNER CITY, HIGH DENSITY, MATERIAL INTEGRATION

John and Amy's modern South African family lives in a medium to high density mixed-use city area.

This modest home design expresses CLT construction as an accessible material and construction method for any family dynamic. For this design an aesthetically pleasing timber home is situated in the city on a narrow plot. Family outdoor space is therefore incorporated into the roof design.

The foundation for the timber structure follows the sustainability factor that comes with using CLT construction. The timber structure gently overhangs the gabion wall foundation. The design celebrates the relationship between the two sustainable materials.

by Micaela Cloete



## Durban's Berea

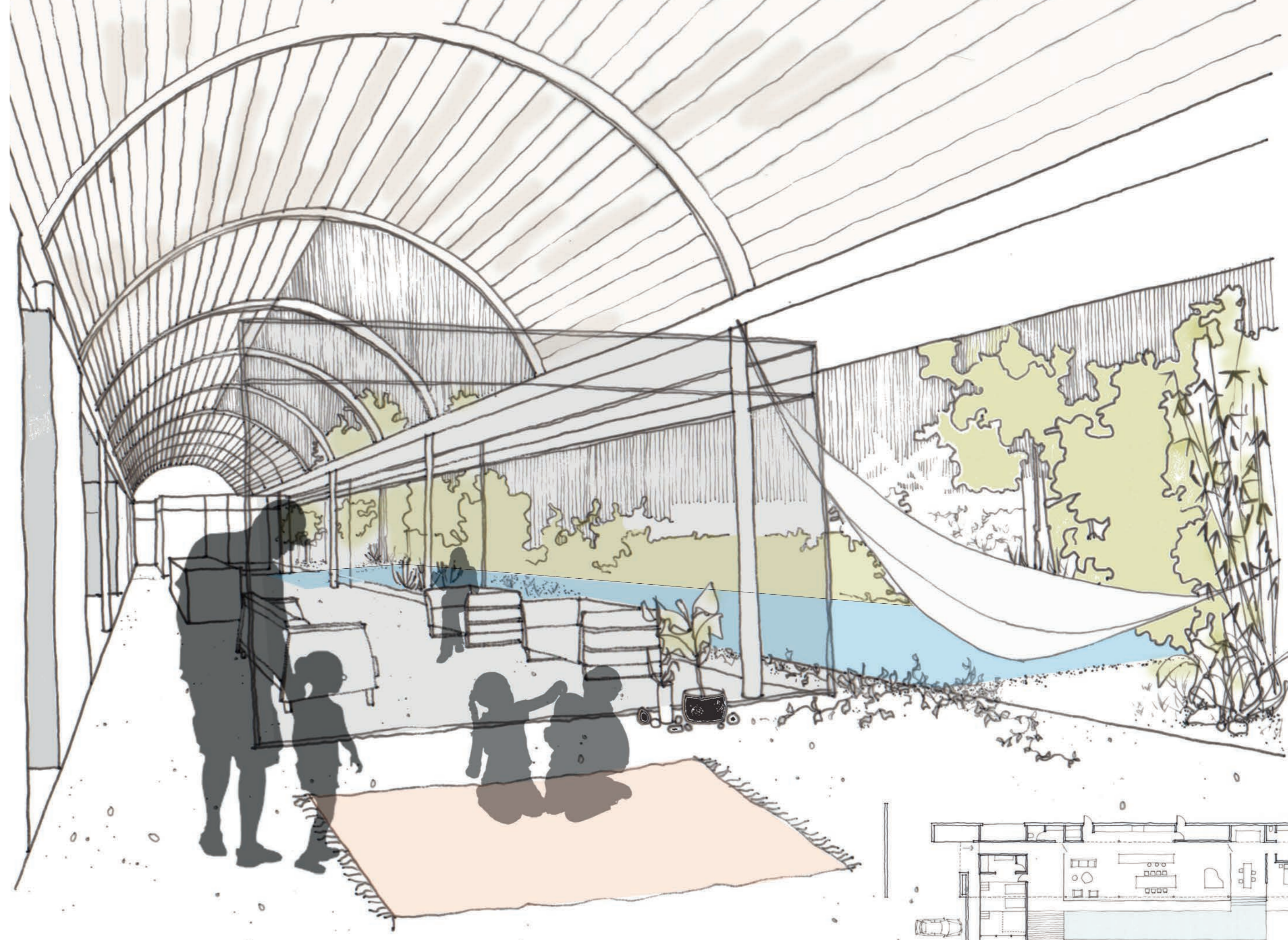
The living passage is an experiment in designing a home that would enrich the family unit - providing an organisation of space that is cleverly defined in its parts, but as a whole was blurred, returning value to shared space, and shared experiences.

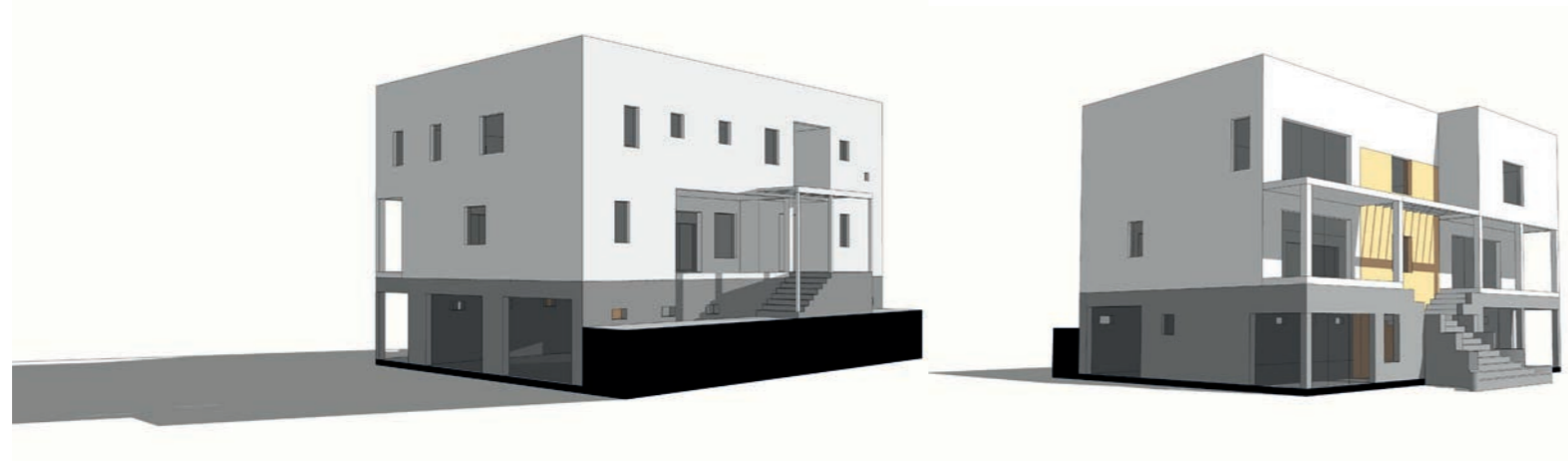
Exploring a range of house typologies, the veranda house, best suited to our city, enabled us to explore a series of parallels - and, more interestingly, the possibilities of those overlaps. Our understanding of John, Amy, and their family are one that are needing to traverse these overlaps and open to exploring a way of living that could grow with them and their needs.

The house intersects a solid, opaque refuge, with a light, transparent prospect across the length of a verdant site on Durban's Berea, making the most of the views and climatic conditions from ridge to harbour.

These components, of refuge and prospect, are each defined by their construction in cross-laminated timber, using the material's capacity to create different structural systems that can tie together seamlessly through their shared material palette. The solid white boxes of refuge punctuate the transparent frame construction of the prospect, providing possibilities of shared living for the family.

by and studio  
Adheema Davis  
& Juan Miguel Dorta Ruiz





## The Fun House

These Are the Determining Factors of the Design

### Client Brief

John and Amy want a home for their family of five. John (an editor) works from home and wants to be able to do so comfortably. Both John and Amy want to be able to generate extra revenue through letting out a studio apartment, which must have its own garden, and must provide a decent level of privacy for both the tenant and the home owners. The neighbourhood is medium density residential: the plots are quite small, sloped, with indigenous forest and breath-taking views to the valley below. The neighbourhood is walkable and relatively safe, thus the connection (physical and visual) to the street is important.

The site's location is inland KwaZulu Natal, which has a temperate climate, and while cold in winter, it doesn't snow there. The home is compact, with the (masonry) basement level housing vehicles and the lettable studio; and the (timber) ground and upper floors hosting the family zones, with the most private areas on the upper level. Two of the children (the twins) are avid gamers, while the third prefers books and animals.

The house is set at the top of the slope overlooking an indigenous forest as well as the street. John and Amy wanted to preserve as much forest as possible as the family love spending time in nature together - hence why

they opted for 3 floors and compact planning, rather than a single storey sprawl on the ground level as is the norm in South Africa.

There is a strong connection to the outdoors via beautiful natural stone steps at the base of a rammed earth wall made from local soils. Inside, a quirky bookshelf springs between the flights of stairs - a good read is always close at hand. John has been thinking about adding a bridge from the dining room to a tree house in the garden however Amy has other ideas about the rest of the budget.

**Site Parameters:** .Not in wood borer belt (ie. Not coastal KZN) // .Has indigenous forest + river // .Has gentle slope // .Cold climate // .Has soil suitable for construction

**Domain Hierarchy clearly defined using:** .Level changes // .Volume changes // .Material changes // .Lighting

**Forces:** Response to context & Response to human desires and habits

### Sustainability

- .Flexibility and Longevity (Spaces must always be able to double up as something else)
  - .Working with the landscape (Grade, resources, water runoff etc)
  - .Working with nature (Passive design & Permaculture principles)
  - .Using renewable materials responsibly
- Small is beautiful (Compact and efficient design)



by Dimitar Dobrev





## The Truth about John & Amy

Very Loosely Based on a True Story

John and Amy were your average thirty-ish, 1 child, work from 8-5 kind of people, living in a 2 bedroom townhouse. With number one almost 2, it was just starting to get a bit tight and they investigated the possibility of moving into a house. Amy is an architect and always envisioned building her own place, having her own practice and well, being famous... John is a patient and calm electronic engineer and loves succulents. Both of them are practical and logical, they believe in a small, but comfortable lifestyle which allows for travel and family gatherings. They are frugal bunch, Amy has a bit of a compulsive planning ahead problem and John keeps a spread sheet for literally everything.

**THE CATHARTIC MOMENT.** Their calm and ever-so planned in advance world is about to be completely shaken... 'OH MY Goodness... It IS going to be TWINS.' They will need to make a plan... and quick. Will Amy's dream of building her own place be a possibility?

**THE STAND.** Most of the affordable stands are really small and narrow. The current economic state in South Africa as well as densification strategies from various municipalities have seen an increase in subdivisions from larger stands, with many home-owners selling a portion of their existing stand. The stands range between 500 and 750 square meters and generally have dimensions between 17m-22m on the short, street edge and a depth of 30m-40m.

They decide to buy a subdivided site in Pretoria, close to a small school for R350 000 out of their existing savings. They have some extra savings for a small deposit, but the rest of the house will require a bond. With a household income of R60 000 per month, they qualify for a bond of R 1,865,243.14. This is not much if you are having 3 kids! At a building rate of between R8 000 - R10 000 per square meter, they could probably manage a 200sqm house.

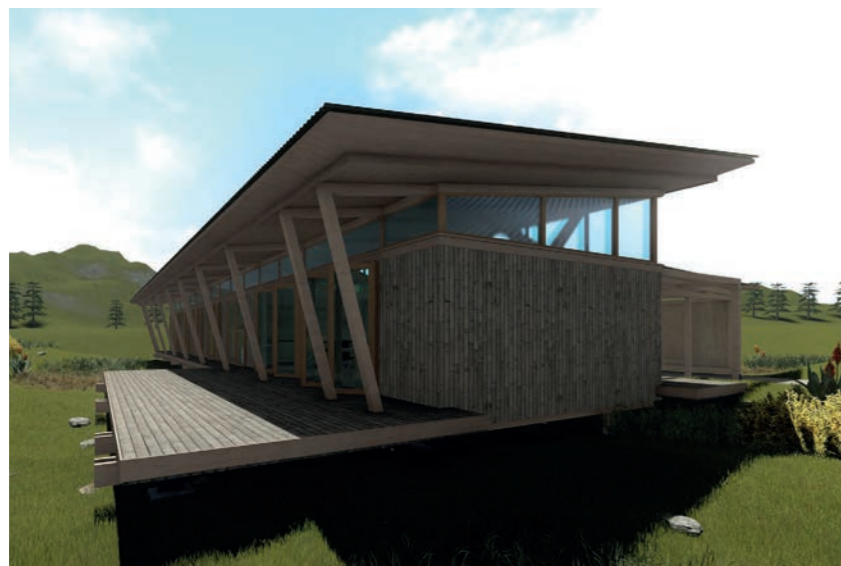
**THE BRIEF.** John and Amy decide that the house should have the flexibility to grow and change with them and should be phased in order to reduce the financial load on their household. The idea of a timber construction house appealed to them specifically because of the ease and speed of the building. They knew the house panels would arrive on site perfectly, without struggles on site with builders who want to deviate from the design, if the construction time was also only 23 days, they could sell their existing house and move into the new place without overlap.

They might be able to build everything in one go, but the phasing option remains attractive to them. For phase one, they will build the bare necessities to be able to welcome the twins in their life. As part of stage 2, they decide to build a garage and in order to service the bond, they will include a studio apartment to rent out on airbnb, which could be flexible enough for visiting family members, Amy could possibly use this as a home office at a later stage or it could be an additional bedroom for the kids in their teenage years. Stage 3 will complete the house with a bedroom 'wing', which will allow the loft and study, which were used as bedrooms up to now to regain their intended use.

**THE CONCEPT SOLUTION.** A simple yet flexible, sustainable house with phasing possibility. The design philosophy in terms of sustainability is to only build and use what is necessary, nothing more and nothing less. The design therefore aims to be simple, clean and elegant. This house will comply with various energy efficiency regulations in terms of glazing, insulation and energy consumption. An underground stormwater/ rainwater harvest tank will also be installed with a pump and filter to use water for household purposes.

by Anchel Gadinger



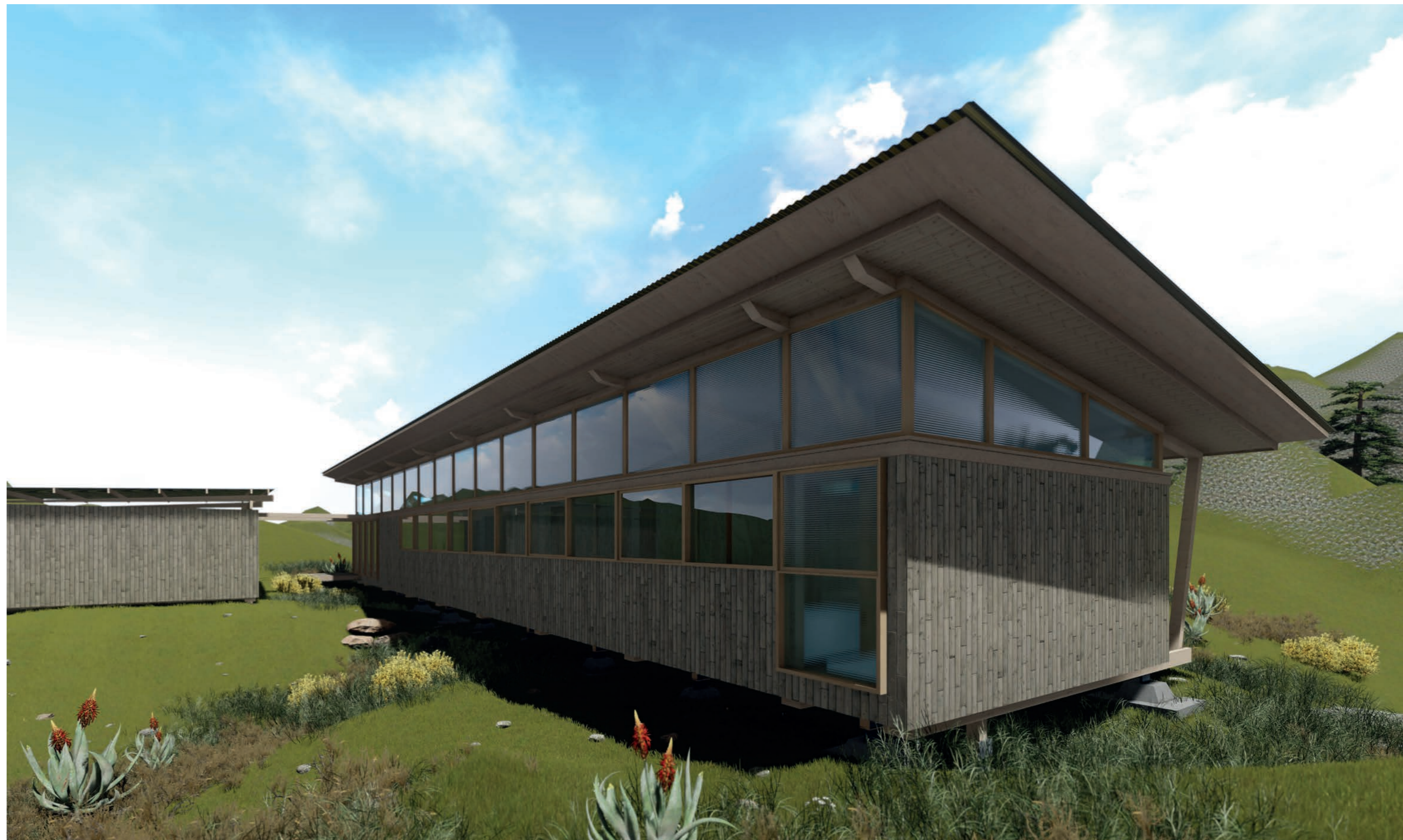


### John and Amy's Family

John, Amy and the kids are a typical South African family who love spending time doing activities together, whether it be braaiing or taking in nature around them. John and Amy have 2 kids, with a third on its way and are looking to build a new family home, a place where they can make a permanent residence which embraces the climate and surrounding environment. They have a limited budget and have decided they would rather spend a little more on a scenic location and complete the house in phases as they start building, expanding as they desire.

### Design

The idea behind the design of John and Amy's family timber house was to build a home very much in the manner of how one would put together a meccano set. To be able to design something that has been pre-manufactured to precise detail which gets delivered to site and installed using either man power or small mechanical assistance. The reason behind this way of building is that components can be accurately and precisely manufactured off-site with minimal wastage and fewer construction glitches. The design also minimizes labour time and cost on site as components are installed upon delivery. As the house is made up of components, one can interchange parts with others either when they are damaged, undesired or can be easily reconfigured to add to future needs. The design can also be customized to allow the house to be built in any location due to off-site manufacturing and on-site assembly. The design makes use of modular components but also allows the client freedom to customize their home to their particular needs as elements just need be rearranged to create different spaces.



by Arné Gunter



## Nature within a Home

“Incorporating Biophilic Design into the very fabric of the building”

John and Amy are married for 15 years with three kids named Olivia (12) Johanthan (10) and Elizabeth (6) and their border collie named Max. They are a typical South African family that appreciate outdoors, nature and spending quality time together.

This timber house is created to enhance John and Amy’s family. A home that has the ability to work, play and sleep in a comfortable environment. The aim of the house is to design a sustainable living space by incorporating nature using the concept of Biophilia Design Orchestrating a very subtle and simplistic design, but still inspires and create an atmosphere of peacefulness and a place that resonate with its surroundings.

The object is to emphasize the true qualities of CLT construction and enhancing the concept of ‘bringing nature into a home’.

The house has the ability to inspire nature within the build form. The house illustrates richness in the use of materials, comfort, closeness to nature, form and proportion

### Biophilic Elements:

- Natural Cross Ventilation
- Harvesting Daylighting
- Visual Connection with Nature
- Thermal & Airflow Variability
- Material Connection with Nature

### Site Location :

Set on a beautiful site in Noordhoek, Cape Town it marries and connects beautifully with its landscape. The site has the potential of future expansion. The site is well located within nature, easy accessible and a place where the children can grow up. The orientation of the Building faces North to enhance natural daylighting within the house.



by Carla Jooste





## A Simple Response to Simple Needs...

A family home needs to be functional, simple and satisfying. It needs to be a space where you can recharge and destress.

The years we spend together as a family is fleeting and time should be used to enjoy experiences and make memories & therefore we do not need mansions that require excessive upkeep, that makes us feel we need to fill it with items that keeps us from living our lives.

This design provides simple responses for simple needs. This design is modern, comfortable, sustainable and can be affordable. It is a space that enhances daily mundane tasks, because there is only space for what is needed. It consists of a simplistic L-shaped layout with a courtyard, which can accommodate any family who enjoy spending time together. The stone and timber textures provide a natural feel and this house can be successful on numerous sites located in areas such as the winelands, suburbs, near the ocean etc. which accommodates the orientation.



by Nerine Joubert



## Story of the family

John and Amy are a middle-class family of five who would like to be within close proximity to schools for their three children, as well as parks, sports facilities and universities as they see this as being their home in which they will raise their children until they enroll into university. Being active is also important to them, so the family would like to be close to recreational, outdoor activities. The family are excited to be part of a historical suburb which has a strong emphasis on community.

They want to live in a safe, suburban neighborhood to raise their children and feel integrated within a greater community.

## Story of the stadium

The City of Cape Town will be relocating all provincial rugby from the Newlands Stadium to the Cape Town Stadium (Green Point) by the year 2020. As a result of this, the iconic Newlands Stadium, which is the second-oldest rugby stadium in the world, presents the opportunity for a redevelopment into a residential entity, which will enhance the existing fabric of the historical suburban neighborhood. With its quiet tree-lined streets and the mountain close by, Newlands provides the easiest access to the city and students have UCT right on their doorstep. The residential complex could provide homes for a diverse demographic; families, university students and young professionals, as well as include additional public spaces for the larger community which will enhance the nature of the suburb.

## The concept of John and Amy's home

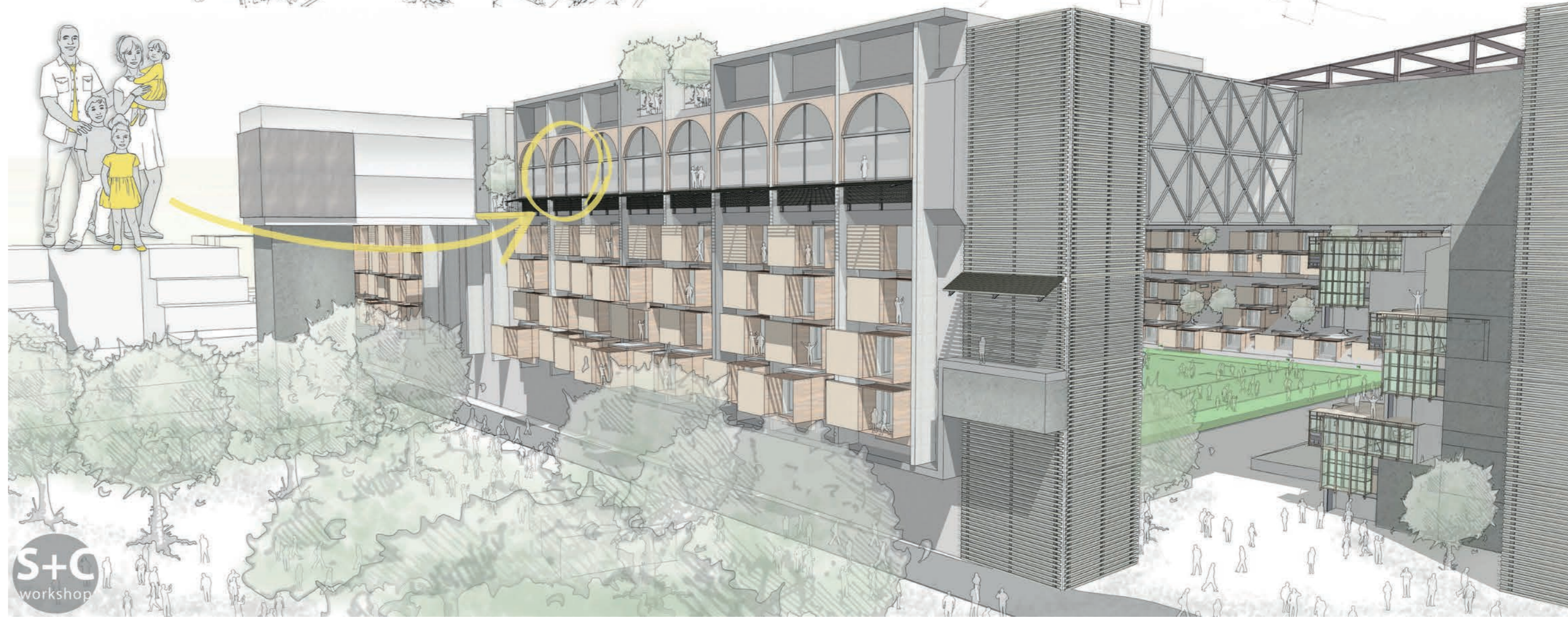
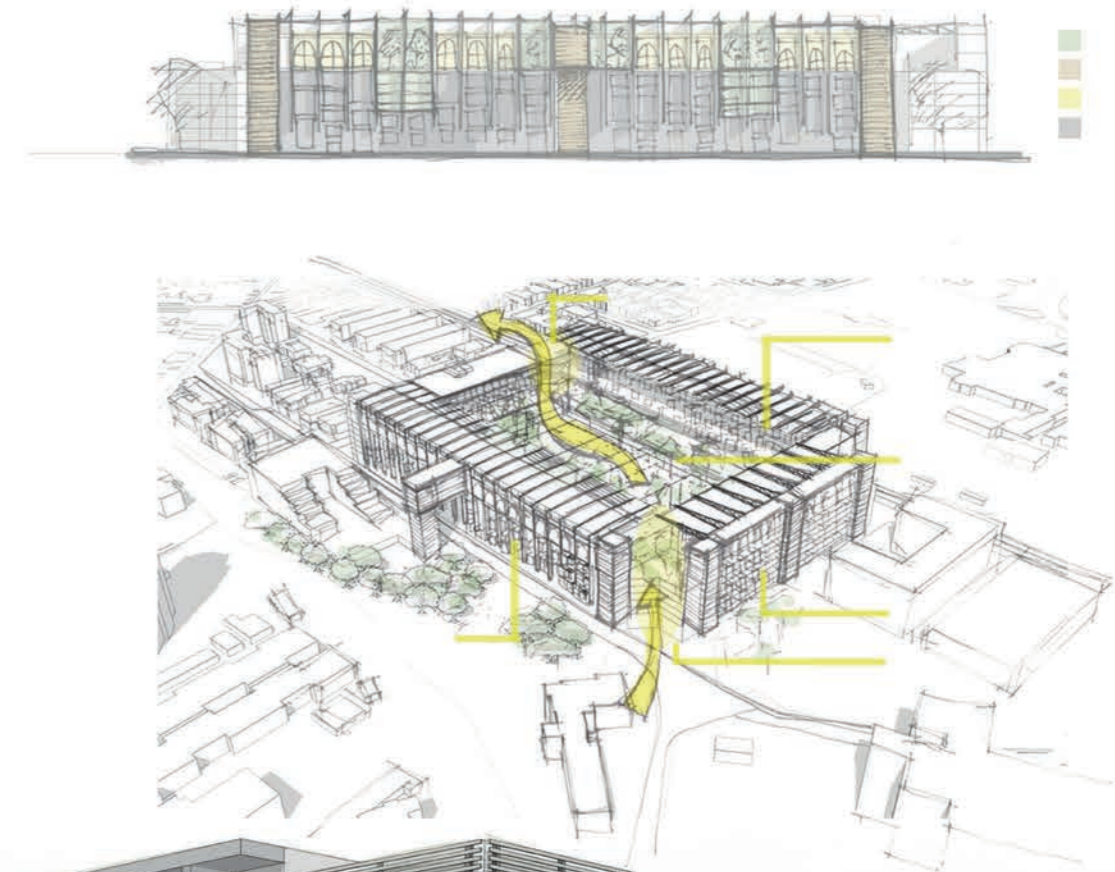
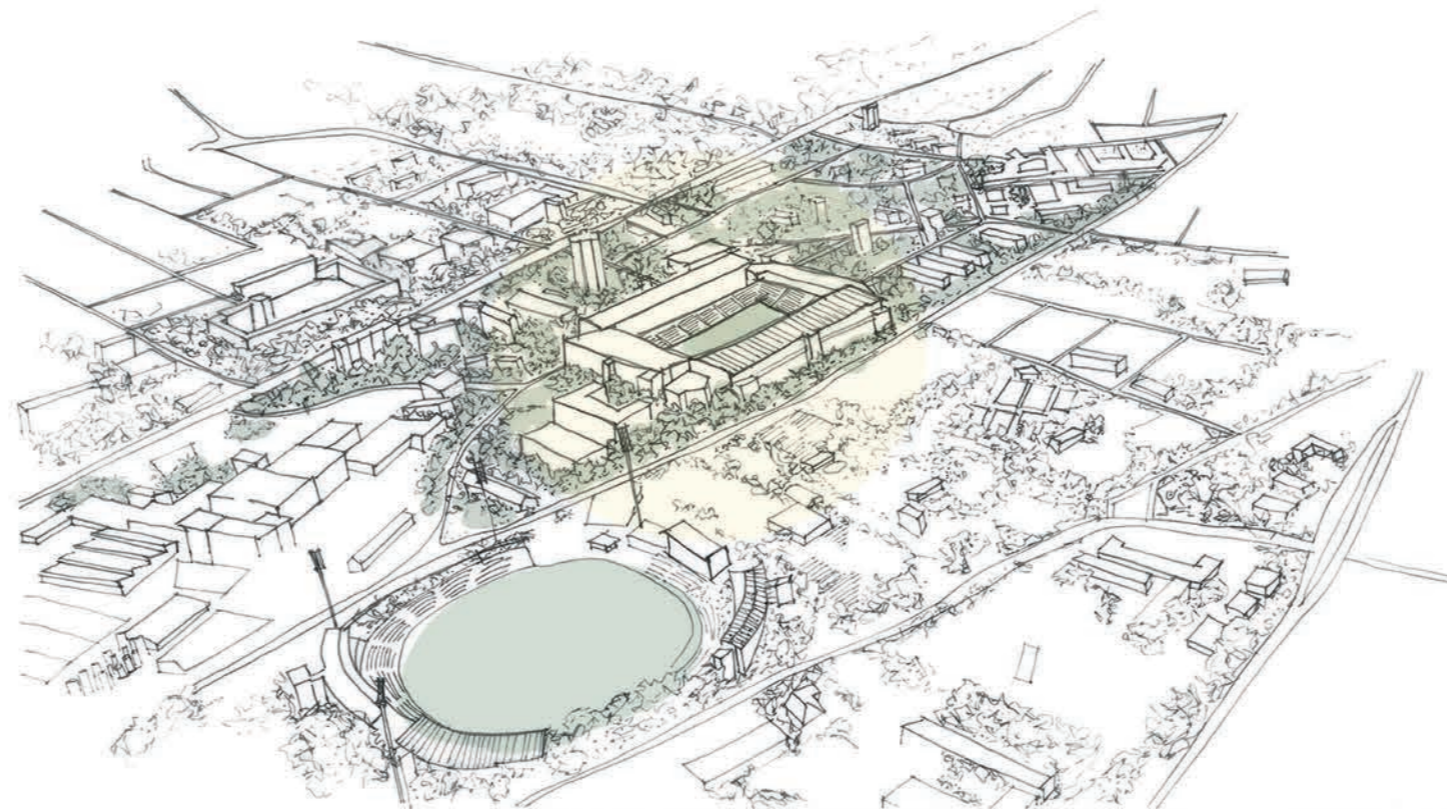
John and Amy's home will be a unit which will form part of a larger scheme within the development.

The development will provide communal facilities, using Cross Laminated Timber (CLT), which John and Amy have access to. In addition, the development will contribute to the existing fabric of Newlands by providing a number of facilities which can be used by the public.

## Key design considerations

- The design will provide a precedent for the innovative capabilities of CLT when applied to the adaptive reuse of an unoccupied (or derelict) structure.
- The use and technical considerations of CLT when combined with various existing materials will be explored.
- Creative means of sustainability will be investigated, as well as how an existing structure can contribute to this.
- Explore the concept of modular design when using CLT.
- Explore how CLT can be used (not only in the design of homes or units) but also communal facilities

by **S+C Workshop**  
**Scott Lenton & Chelcie Akom**



## Re-Imaging Social Housing

The provision of housing has become an integral part in the world. With increasing expenses within the South African landscape the need for sustainable low cost housing has become a necessity within disadvantaged communities.

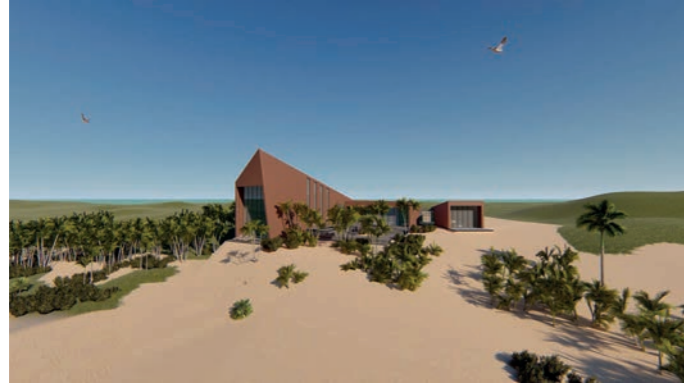
The project symbolizes the average household, the concept explores easy Mass assembly with soft thresholds linking communities.

Using CLT production makes affordable housing possible further ensuring low skill requirement while being a warm family home. Housing is no longer mono-functional it will resolve an array environmental problems. The approach of a social housing fosters connection between addressing local issues while satisfying the needs of the client.



by Fundokuhle Kubheka



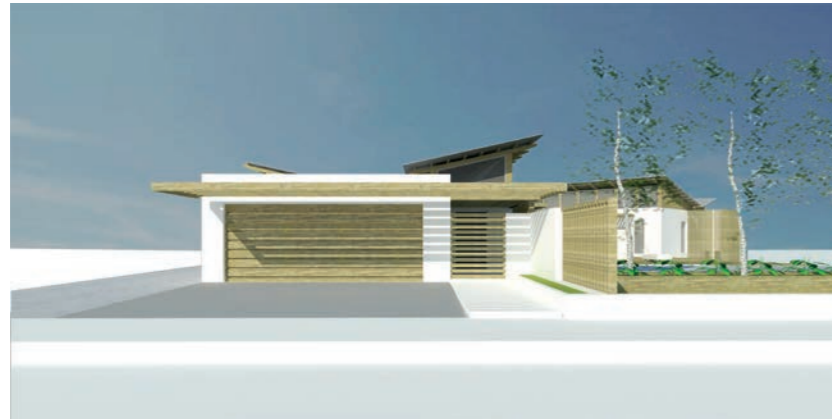


## Frames

Family homes have always been a place where memories manifest themselves. Memories like films can be seen as pictures being viewed by the user frame by frame. These sequences create a particular order which brings us back to the home. As the home is functioning systematically so do their contents. Frames micro-systems exist within every part of the home. Family and their relationships with each other work similarly. Both framed in an ecosystem of living, both connected. People and their environment are perfect reflections of the homes they live in. Framing this concept with one another inspires creativity and simulates vertical frames with horizontal. Human activity is framed by these principles and thus creating a space the user can call home.



by Walter Lombard



A contemporary aesthetic and a socially | environmentally sustainable balance has been given to the Timber House Design providing a minimalistic and charming gesture with functional pergola and clerestory features on both dwellings. The design has a non-conventional special layout oriented diagonally for easy flowing circulation that blends well with the geographic orientation, maximising indirect north light into the living spaces.

In tackling the Timber House design, a number of water collection points have been incorporated for irrigation and daily household usage.

Focus on providing imperatives such as, human well-being, economic efficiency and most importantly environmental integrity has been emphasised on the design.

John and Amy are an environmentally conscious family and are empathetic to the current status core of the global environmental crisis.

So as a smart and environmentally considerate client they have proposed that their design incorporates specialized and sustainable building materials such as CLT and NOVATOP as to create inventive ways of dealing with spaces and construction in their new home. In addition, they suggested an exciting design that sets itself apart from the current practices, with entertainment areas, livings and relaxation spaces that have an inside outside connection. This is due to their appreciation of nature and to create a subconscious awareness to their family and friends that will eventually visit their home.



by Mongezi Msomi

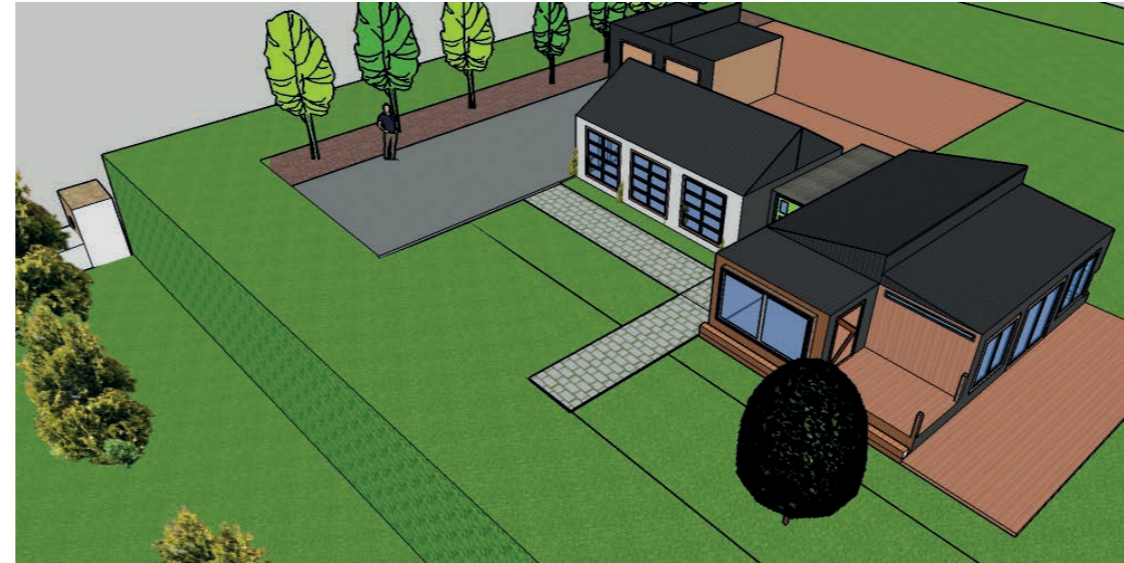


## Embrace the country

Growing up on a farm it is quiet and peachful so I thought why not stay true to my roots and create a house similar to it but just in a modern way. My designs is mostly focused towards futuristic and organic shaped buildings but I took a risk by keeping it down to earth and simple. The house is designed for big and small families that love having friends and family over especially to gather around a big fire and braai. It is a unique space for the family to put their own stamp on the house. The house is suitable for families that want to say goodbye to the city life and escape to the country because who doesn't love the farm.

I found my inspiration from a old storeroom on the farm. I saw a great potential in the building as it does have a old history feeling about it and it is suitable for a family. I grew up on the farm as a child and it is just very peachful and being surrounded by vegetation creates a calmer feeling to the space. I started my concept design with bubble diagrams with no indication of the rooms inside the building. It helped me determine the shape of the house.

I designed the house according to my family. I had to picture myself and my family in the space and the environment. We are a family of five just like John and Amy so I saw it as an ideal space for my family. It is inspired by the old storeroom but it takes on a feeling of a modern and barn feeling. I designed the house like this because I want the family living there to feel comfortable. I imagine the house standing on a hill between the vineyards peeking above tall pine trees but still keeping it a secret as it is not totally exposed in it's full body. Picture a long drive-in with pine trees on the side of the road and a open veld driving up the hill to get to the house with spectacular view of the beautiful mountains and the clean lines of landscape. The reason why I picture the house on a farm is because it is peachful and being surrounded by nature in his true beauty, it will blend in very well with it's different variety of colors and the location surroundings I went with black corrugated metal, timber cladding and timber that is painted grey to create a barn feeling to the house.



by Angela Snyers



## Unboxing the Farmhouse

John + Amy's family, being a typical South African family, has a busy lifestyle, constantly running around between work obligations + extra-mural activities of their Children. A "Off the Grid" weekend / vacation house in the Great Karoo is the perfect break-away from their hectic lives. The fact that there is no electricity gives the family a much-needed break from electronics which constantly interferes with their family life.

The design is simple and un-cluttered, providing the family with a peaceful, relaxing home. A house which is easy to construct in a remote landscape, the Great Karoo, as well as "Lock-up + Go".

Reinterpreting the traditional South African farmhouse, the concept of "Un-Boxing the Farmhouse" leads to the idea of sliding verandas on each side of the house to create covered outside spaces, as well as to reduce the effect of solar heat gain. These verandas will act as security, once closed, when the family is ready to leave.



by Monique Visagie

# Timber Competition Participants

## Jury



**Pavel Horák**  
Prodesi  
Prague, Czech Republic



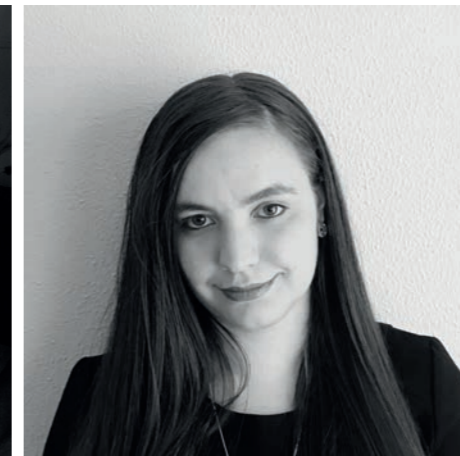
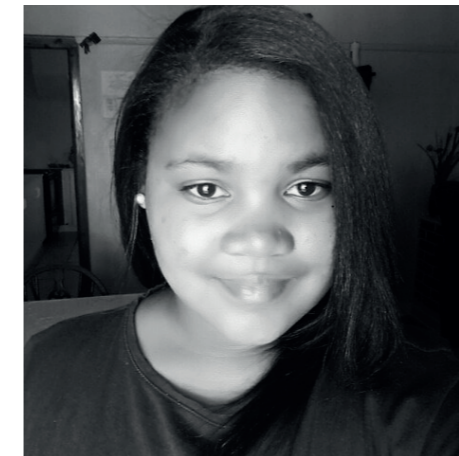
**Ivan Jonker**  
Jonker & Barnes Architects  
Cape Town, South Africa



**Mano Kalos**  
Mano Kalos Architect  
Cape Town, South Africa



**Richard Stretton**  
Koop Design  
Durban, South Africa





This booklet introduces the first concepts of sustainable homes for South African family designed by participants of the Timber Competition.

Concepts will be further developed until April 2019 when the final projects will be submitted. Follow the Timber Competition on Instagram and Facebook for more information and inspiration.

#### Main Competition

The winner chosen by international jury will enjoy a one-week internship in Prague, hosted by Prodesi Architects. For the second place, the Timber Competition team prepared a weekend in the Hout Bay House, CLT house and research project in Cape Town.

#### Facebook competition

After introducing the concepts at the Wood Conference 2019, the Facebook competition will be open, and fans are invited to vote for the most popular design concept. The author receiving the most likes will be invited to Creation Wines to enjoy their Wine & Food pairing.

