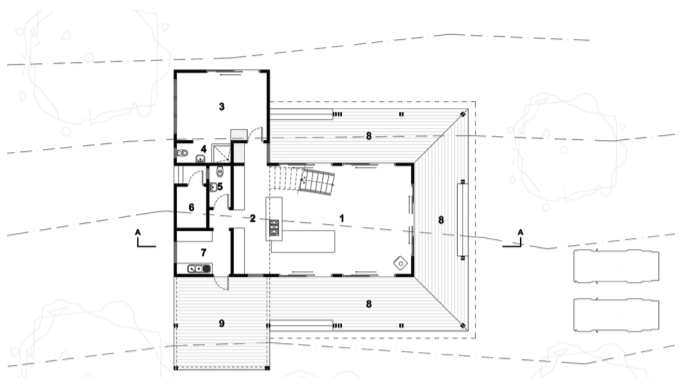
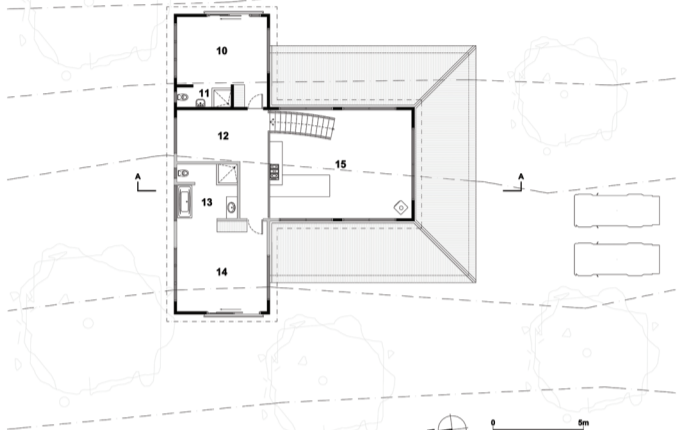


'KAMEELPOORT' A FARM CABIN IN LEONARDVILLE FOR MOSTERT FAMILY



Above: Ground Floor Plan

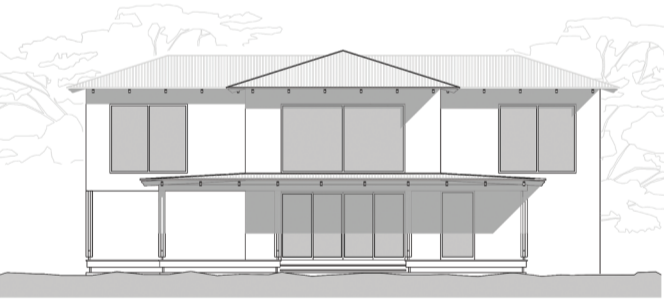


Above: First Floor Plan

Key:
1. Living Area 2. Kitchen 3. Bedroom 03 4. En-Suite 5. Guest WC 6. Store Room 7. Stoop
8. Stoop 9. Entertainment Area 10. Bedroom 02 11. En-Suite 12. TV Room 13. En-Suite
14. Master Bedroom 15. Double Volume



East Elevation



South Elevation

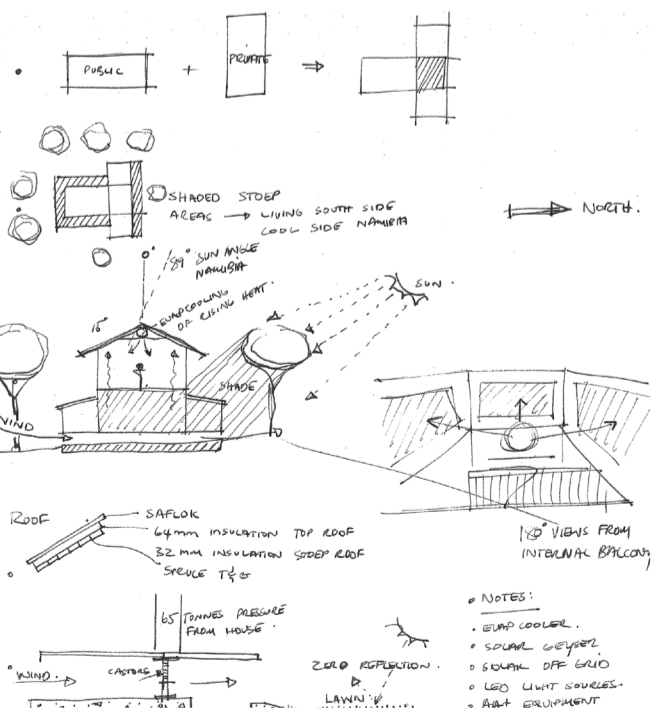


Photo: Pieter Mostert



Photo: Pieter Mostert



Section A - A

Located along the banks of the 'White Nossob' river close to Leonardville, Kameelpoort's cabin was a long-time dream for architect/client/Pieter and Verena, to move away from the norm and create a fresh outlook on space & material used in the extreme Kalahari context.

The definition of a cabin is a small shelter or house usually made of timber, which is situated in a remote area. To build with wood is an idyllic concept in Namibia, and lies in with the clients brief - "we want a cabin in true form, space, material and small - captured in one word, 'breakaway' ". Thus the very simple shape flowed out of the architects pen with two rectangles moved over each-other, merging private and public spaces ...

One's first observation is the contrast between its natural surroundings versus the minimal human intervention - where the house was carefully placed- and the size determined by the existing trees. Existing trees were kept at all cost, with one small tree on the northern side, being very close, only losing a branch in the process. The northern balcony is in the process of re-design to accommodate this tree, and give proper sun screening to both top & bottom rows of windows on the façade.

Located on top of a Kalahari dune this cabin has a 360-degree panoramic view as far as the eye can see, over the game farm, scaled and colour coded in a way that it hides itself among the trees, similar to a Kudu blending into the bush.

The Cabin is orientated with its double volume living space (daylight activities) facing the cooler south side, away from the sun - allowing the living areas to be in the shade. The bedrooms face east and west towards the predominant views, for the best sunrise and sunsets nature has to offer. A farm-style stoep surrounds the cabin on ground floor level to assist with sun control, extending the living room out onto the lawn, removing the interior/exterior barrier.

With the cabin theme the emphasis was on wood construction, and material used had to be time efficient due to it's remote location. Namibia unfortunately does not have suitable natural wood, and thus it was imported in its natural form, as the client wanted maximum use of local labour and value addition. The wood was laminated, profiled, cut and designed within Namibia, including the manufacture of the profile blades. All the walls are 120mm solid German spruce transformed by the hand of a 'Meister Zimmermann', giving the structure its great thermal qualities.

A steel re-inforced raft foundation was cast, and the cabin ground floor placed on steel castors, raising the ground floor 600mm from ground level, allowing the house to 'float' on the dune and fooling termites into not knowing they have tonnes of food above ground. The floating stoep was a requirement by the client, in order to create natural seating right around the house... lawn was planted up to the overhangs edge with a natural sand barrier up to the float foundation - further preventing termites to access the structure with a natural green barrier eliminating the need for poison, as the family has a 4 year old boy, dogs & a meerkat!

These castors are adjustable to compensate for the compaction settlement of the 65 tonnes of wood, to date settlement was around 55mm in certain areas of the structure. The compaction of the wood, also had to be taken into account over window & door openings - special sliding joints, gaps on top and cover architrave panels was designed between the architects, carpenters, joiners and aluminium specialists. Laminated glazing was used throughout and special clearguard stainless fly-screens, to allow natural air flow without insects entering.

All roofs are secret fix Saflok, with perforated eave edge detail, allowing ventilation between the 64mm insulation and roof sheeting. The metal roof was used as a lightning earth shield over the house, grounded with solid aluminium rods and 3 meter copper pegs driven into the sand dune. This had to receive special planning, as the result of lightning is very apparent on the strikes the natural yellow wood trees display after a thunderstorm.

The double volume allows an internal reservoir of hot or cold air - during summer the cold storage is increased with the evap cooler, and heat during winter with the wood burning calore fireplace. The clients request for maximum window openings worked against the thermal properties obtained by the solid wooden walls, which are the least insulated on the shell of the house. Electrically operated see-through screens were installed on the top windows, still allowing maximum views, but assisting sun control and radiant heat/cold.

A single skin chimney inside the house was used to increase effective heat distribution, and double insulated flue going through the wood and roof, protecting the wood, with a special spark top to prevent field fires. Wood is in abundance on the farm and part of the house's theme, for renewable energy.

The Electricity of the house was planned in detail from day one, with solar panels, battery storage and inverter - feeding AA+ appliances, LED lights & watercooler - allowing a completely off the grid self sufficient system. Hot water is provided by a solar geyser & gas heater back-up (the back-up has never been used). The stove & oven is also gas operated with a very cost effective source. Special design attention was given to the location and channelling electricity, water & waste pipes, because the walls are solid. Reticulation was planned to easily be serviced, attaching it to the underside of the raised ground floor, and using a castor trolley moving around on the raft foundation - lying down. The showers were designed with special boxes and trays to be free of the main structure - this now could be tiled and pipes hidden on this 'free standing' element, without the risk of settlement by the main structure, causing cracks and tiles falling off - special low exit traps assisted with the minimum space between the tray and the wooden floor, where in a normal house, these are embedded in the concrete floor. Solar systems were used for the borehole water supply and pool pumps.

All in all this was a huge learning curve, without any previous design or working samples in the country, that could be used. All and every detail had to be designed from scratch together with hundreds of hours on site with Hess Carpentry playing the pivotal role in this venture... the owner architect and contractors had to work side by side - to have this very special house come into existence... The culmination of all this effort...? A house that can stand proud in the 100 year celebration of the Mostert family farm, in this very special corner of Namibia and the Kalahari.

A perfect getaway from the daily hustle where one can sit back and relax with your feet in the red sand, where new inventions and tested principles were married and applied to bring forth, through innovation, a dream construction into reality.

'God is in the Detail'...Mies van der Rohe

