



house terblanche__thesen islands

Situated on the south facing edge of Thesen Island, the site of House Terblanche was presented with uninterrupted southern views across the lagoon towards the western head. However, with neighbours on both sides and the Drymill lying towards the North of the site, the need for privacy became a critical concern.

The primary driving concept behind the design became the creation of a generous internal courtyard. Consisting of various volumes of differing sizes organized around the courtyard, this allowed the house to become the background canvas to this central living space. The size and placement of the courtyard further created the opportunity to maximise the northern exposure of the main internal living spaces

while capitalising on the magnificent south-facing views presented by the site.

The main living areas, situated on the ground floor, are designed to open up onto the courtyard with the living room, family room, bar and dining room, kitchen, gym and study having easy access into this flexible space. Through this, the courtyard becomes an integral part of the living home.



“...the courtyard becomes an integral part of the living home....”

As the central focus and entertainment hub of the home, the courtyard was designed as a place of rest and relaxation, incorporating a large rimless pool, expansive deck, Koi pond, Jacuzzi, braai area and outside bar. Several smaller courtyards spatially link up to the main courtyard, creating additional pockets of living space such as a pizza-making nook with a Mediterranean character, as well as a quiet reflective space cleverly positioned next to the study.

Internally, the kitchen with its rugged timber barn beams connects well with the outside entertainment area and is characteristically

the internal heart of the home. From the kitchen, there is a comfortable flow into the dining and living areas which culminates in a spectacular bar area, with its double volume wine cellar serving the opposite side of the living rooms. A private cinema is situated just off the bar (for obvious reasons!)

The bedrooms are all located on the first floor overlooking the central courtyard, while another striking feature of the house in the form of a digitally controlled telescope deck with a sliding glass roof, providing magnificent views of the clear night skies, is situated over the internal staircase.



“...volumes of differing sizes organized around the courtyard allowed the house to become the background canvas to this central living space...”

Various energy and water saving measures have been implemented throughout the design, including both solar hot water heating and solar pool heating, substantially cutting down on excessive electrical consumption. Rainwater harvesting is also utilized, with several underground water tanks minimising water use, while the use of energy efficient fittings and fixtures in conjunction with passive design principles such as orientation, shading, natural ventilation, thermal mass, evaporative cooling etc. also aid in minimising the overall energy use. Additionally, the telescope deck's sliding glass roof also acts as a natural stack ventilator for the house in summer, while also allowing ample sunlight into the interior during winter.

Landscaping within the design is growing well, with the large olive trees that were planted halfway through the building process having established themselves, and the herb and vegetable garden also well underway.

Attention to detail was one of the hallmarks of this project: The clients, consultants, contractor and subcontractors all put in that extra effort necessary to make this home what it is. Most of the credit for this project must however go to the clients; Tibo and Esta, who were intimately involved in every aspect of the design and allowed the house to become what it wanted to be...



percy mdala high school_knysna

In 2006, CMAI was approached to design a multi purpose school hall for Percy Mdala High School. The most economical proposal was to fill in the open space the school uses for morning assembly, but since the proposed hall will be inserted between two existing buildings, it was felt that noise pollution might disturb the adjacent classrooms. After analysing the surrounding area, it was found that there was also no building large enough which could be used as a community hall, so the alternative was to design a freestanding hall which could be used by the school and the local community. After meeting with representatives from Percy Mdala High School, it was decided to design the infill multipurpose hall and another freestanding school hall.

The second hall has seating capacity for 1200 people and its purpose will not be to serve the school and the surrounding

communities, but the intention of this hall is to attract all the residents of Knysna to make use of it. The Main Hall will be located next to the current sport field and it has a spectacular view of the lagoon that could be used as a marketing tool to let out the hall for conferences, weddings and various other events that could generate extra financial income for the school.

A general rule designers follow is that form follows function, meaning that the use of the building will dictate its shape and style. CMAI changed the rule in this case, because designing a structure that could be used for one single purpose will not be viable for the school and the community. Current trends are to design buildings that will flexible and inspire, uplift and empower the people that will make use of the structure daily. Numerous examples in Soweto and Port Elizabeth have shown that tourist attractions

placed within the previously disadvantaged communities creating economic growth in those areas. CMAI, together with the clients, have turned the needs of one school into an opportunity to fill a void in a community. We would like to thank Percy Mdala High School for approaching us to produce the designs and Nieuwoudt & Company for assisting with the structural design.



Recently completed on the Pezula Private Estate

house on the hill_pezula

Architect:
Engineer:
Contractor:

CMAI
LSM Structures
Andrew Hare Builders

new opportunities for urban innovation

Through several innovative development projects, CMAI's approach towards New Urbanism and New Ruralism illustrates the advantages of sensibly addressing modern planning concerns in South Africa

Conventional sub-urban models have begun to highlight the problems faced by modern town planners. Personified by the endless urban horizon of sprawling houses, townhouse complexes and estate developments, these sub-urban patterns have resulted in higher infrastructure costs, larger commute distances and various other negative environmental impacts. Particularly in light of rising fuel costs, higher levels of traffic congestion, crime and soaring levels of inflation, the ability of our cities and towns to cope with these extensive development policies have highlighted the need for a more sustainable solution – a better way of living.

Over the past decade, CMAI has been a strong proponent of innovative design concepts such as New Urbanism and New Ruralism within our South African context, consciously leading the discussion on ethical and ecologically sensitive development. Exemplifying international practice standards through award winning projects such as Thesen Islands and Harbour Town, our team of architects, urban designers and

landscape architects have taken on the role of principal designers, project coordinators, development managers and co-developers on several ground breaking projects.

Based on the concept of traditional neighbourhood design, New Urbanism is an approach to designing cities, towns and neighbourhoods based on the idea of creating compact, walkable communities within a sub-urban context. Incorporating a full range of housing types, ages and economic classes, these neighbourhoods form the basis of a diverse and integrated community structure. The village centre is located within five minutes walking distance for all residents, ensuring that key community functions and facilities are easily accessible to the whole community, particularly the elderly and the young. This centre also provides a number of opportunities to establish local retail facilities, offices and a core for recreational and leisure activities.

New Urban developments are site specific and site sensitive, encouraging aspects such as earth-friendly architecture, energy

conservation systems, historic and cultural preservation, as well as accessibility to a broad population base. While pedestrian movement, cycling and public transport systems enjoy priority within these developments, vehicular traffic movement is easily accommodated in the street grid of sidewalks, trees and on-street parking. Due to the structured network of streets and lanes, a number of alternative routes can be taken to a desired destination, promoting connectivity and accessibility.

In a similar manner, New Ruralism progresses the New Urbanist concept of walkable, higher density communities to a rural context through the strategic creation of compact villages or hamlet clusters. In blending into the rural landscape, these schemes are characterised by lower density, predominantly single storey developments pockets of mixed-used activity. Particularly within sites characterised by sensitive vegetation and ecosystems, this type of development successfully satisfies the desire to be close to nature whilst simultaneously accommodating the essential growth rate of the country.

new urbanist design principles _101

SEMI-PRIVATE COMMUNITY STREET BLOCK WITH COMMON GREEN



Inclusive neighbourhoods

- Basic amenities within walking distance and accessible to all members of the community
- Centre of the neighbourhood = retail, offices, community + **leisure activities**
- Full range of housing types provided as density decreases from the neighbourhood centre.
- Broad spectrum of age and economic classes integrated into a holistic community



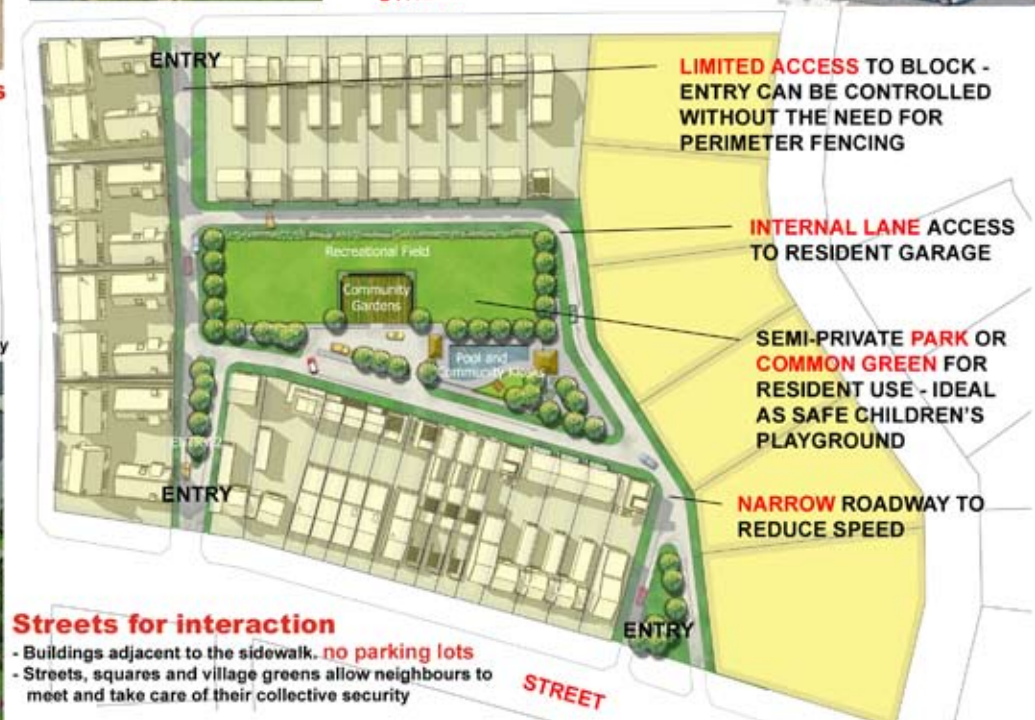
Pedestrian - friendly neighbourhoods

- Neighbourhoods where residents live within a **5min walking distance** of the centre.

Streets for people + vehicles

- Streets laid out enabling alternative routes to a desired destination.
- Roads are narrower with **slower traffic**, yet include parking, sidewalks + trees

STREET





Situated on the eastern boundary of the Kouga area, west of the Van Stadens Bridge and Wild Flower Reserve, the proposed development will comprise the two rural hamlets Crossways & Sunnyvale, located on either side of the N2.

The 590ha site is planned to be developed as a multifaceted New Ruralism community. This will be sustainable in all respects, and is envisaged as a dynamic rural node that unites, as integral components, several residential hamlets, a scientifically managed commercial dairy farm, tourism and recreational areas, as well as a small commercial and light-industrial component. A large nature conservation component will also be included, linking the property to the Wild Flower Reserve.

Located approximately 40 km from Port Elizabeth, the developments are also closely situated to the prestigious Woodridge College and Preparatory School, as well as to the Apple Express railway line. A new station along this line is also being investigated, potentially linking Jeffrey's Bay and PE.

Agriculture will also form an integral part of the development with the existing dairy farm in the process of being holistically re-planned, adding new pastures to the existing ones and installing irrigation systems while a large fresh-water dam will also be created to provide water for the development, as well catering for recreation, farming and irrigation purposes



project update_veldrif

The Flaminkvlei and Velddrif Bridge multi-faceted developments are planned as sustainable settlements in the long term along the southern banks of the Berg River. It is located immediately opposite Port Owen and Admiral Island in the town of Velddrif. The proposal, currently in the scoping process, envisages as a combination of a residential marina resort, tourist and bird-watching facilities and fishing village, a large-scale fish-farming operation as well as certain agricultural, conservation and associated tourism activities as integral components.

The Flaminkvlei Development company has entered into agreement with Cerebos to develop this land once the necessary approvals have been received. This land, which is now added to the original application, stretches from Flaminkvlei eastwards towards the R27 West Coat Road and across all along the edge of the Berg River. The Cerebos property is 150 Ha in extent and consists almost entirely of sea water salt pans used for the current Cerebos Salt works.



Encompassing an area of over 258 ha of land currently used for grazing and irrigation, Boplaas is centrally situated along the R102 between Jeffrey's Bay and Humansdorp. Occupying several gently sloping pastures which border the riparian corridors, the site links several natural dams directly fed by the Klein Zeekoe River which runs through the middle of the property.

Based on the New Urbanist concept of walkable neighbourhoods, the proposed development will cater for approximately 2000 residential opportunities of which 15% will be affordable housing. The urban character of the development will consist of a several varying density nodes, meeting the demands of a broad range of lifestyles and housing markets. Additional facilities

will include possibilities for a nursery school, a clubhouse with sports facilities, an equestrian centre and retail outlets for convenience shopping, as well as a large hotel.

A proposed dam will further offer opportunities for recreation and irrigation, including a reservoir for potable water. The dam and associated riparian areas will also contain walking and hiking trails making use of opportunities such as bird watching and fishing. The use of alternative modes of transportation is encouraged, and will include horse, bike and other non-motorized forms through several site thoroughfares, including a series of bridle and walking trails. These corridors will at the same time act as an attractive landscape feature linking a system of parks, greenbelts, and viewpoints.



The addition of this portion of land makes for a better integrated ecologically sensitive development. The Berg river front opposite Velddrif can now be developed and managed holistically and by one entity to ensure the integrity of the sensitive areas.

In view of the rich bird life of the area, which is famous in particular for its large flocks of breeding flamingos, particular attention is being paid in the design to accommodate and enhance bird life in the Berg River estuary. Flamingo viewing facilities of international standard are to be created and the intention is to make the planned development part of the Western Cape's Flamingo Route and extend the tourist potential of the area. The addition of the Cerebos property to the existing application now creates the possibility to even further enhance this concept, with another 100Ha of water being added, excluding the 35 Ha the residential village will occupy.



flaminkvlei-cerebos

house van der linde_sparrebosch



"Natural materials and colours palettes were used to create a feeling of warmth..."

Situated within the Sparrebosch Clifftop Estate, House van der Linde is brought to life by its dramatic location overlooking the 17th hole of Pezula's Championship Golf Course, coupled with its panoramic indigenous forest and ocean views.

Due to the fairly steep site conditions, the design required a comprehensive conceptual vision capable of maximising the northern exposure of the building whilst offering protection from the prevailing winds. This encouraged the development of a central north facing courtyard wrapped by the three main wings of the house, defining an internal, sheltered living space. Coupled with the differing levels across the site, this response resulted in a terraced layout approach, allowing the various ground floor activities in each of the three wings to occupy a different level within the courtyard, which serves as the common spatial connection between them.

The house utilises a number of active as well as passive energy solution strategies, maximising aspects such as solar orientation, natural ventilation, large roof overhangs and passive cooling solutions. The deep rim-flow pool, which extends to the

edge of the house, aids with the evaporative cooling of all the spaces around it while low level glazing allows the reflection of the water to be visible on the beautiful timber flooring inside the passage and living areas. Natural materials and colours palettes were used to create a feeling of warmth on the outside, which is reflected inside by the extensive use of natural timber. In addition, rainwater harvesting and the retention of naturally occurring biodiversity on site were encouraged in aid of reducing the overall carbon footprint of the building.

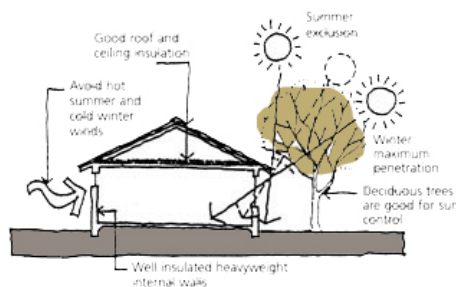
A lot of time was spent on the unique interior of this house, with aspects such as finishes, fittings, cupboard and kitchen details are carefully given due consideration in attaining a holistic and integrated character. Again the clients played a crucial role in the appearance of the final product and it is evident if one looks at all the unique personal touches throughout the design.



sustainable passive design principles

In most modern homes, the creation of a desirable microclimate is achieved through various mechanical appliances, utilising a large amount of energy and increased running costs. Particularly in light of the recent energy crisis, the need to reduce excessive consumption has become an important aspect of everyday life.

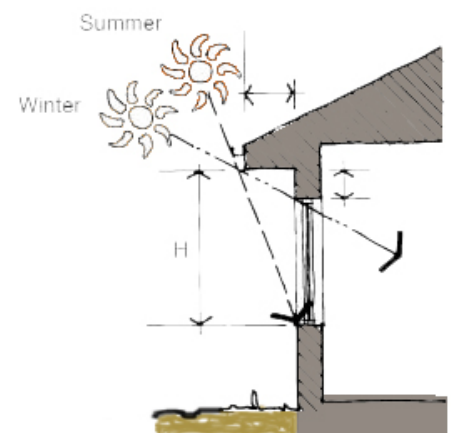
Passive design refers to the use of the local climatic and environmental conditions to moderate the heating and cooling of buildings. In this approach, the building or an element of it takes advantage of natural energy characteristics in materials and air created by exposure to the sun. In conjunction with the proper use of energy efficient building materials, numerous passive design solutions should be considered in reducing overall energy demand whilst achieving a comfortable home environment:



Orientation: Generally, main living areas should be orientated towards the north for winter warmth, as well as light during summer. Utility areas such as garages, storage, laundry- & bathrooms should be positioned towards the south-west, shielding the house from the harsh western light.

Ventilation: Openings within the house should be carefully positioned to allow cool breezes to provide cooling and cross-ventilation during summer.

Shading: The effective shading of walls and openings prevents the transfer of heat into your home. Roof overhangs, window eaves, awnings and vegetation can all be utilized for this purpose.



Insulation: Walls and roof spaces should be sufficiently insulated against heat and cold transfer.

Thermal Mass: Thermal mass can effectively even out variations between day and night temperatures. Heavy masonry walls, concrete floors and Trombe-Michael walls, can be used to absorb solar heat during the day, re-radiating this heat at night particularly in warm temperate zones where hot days can be followed by cool nights.

thesen islands powerstation

Reinventing the role of the island's historic landmark

Retained for adaptive re-use on The-sen Islands, the old Power Station was once used to provide electricity for both Knysna and Plettenberg Bay. As one of the oldest industrial structures on the island, it is currently the subject of an exciting and extensive architectural re-design.

The building is being redeveloped into a modern twenty-four (24) room boutique hotel, which will include a restaurant, spa and conference facilities. The existing building shell and structure will be retained, along with most of the existing equipment which includes three Stahl turbines, a GEC turbine, a Bellis & Morcom turbine, a section of the Babcock & Wilcox boiler and extensive portions of piping that will be retained.

The building is an example of how previously derelict and obsolete industrial structures can be sensibly adapted and re-used to house a variety of functions. It also illustrates how the adaptive re-use of existing materials and structures can preserve the sense of history associated with this building while responding to the surrounding commercial area in a positive manner. CMAI is currently engaged in the approvals phase, with construction due to commence later this year.



house van rooyen_brenton-on-sea

With a striking panoramic view of Buffel's Bay, the design of this small home in Brenton-on-Sea presented several challenges due to the site's steep southward facing slope and pristine natural vegetation.

The careful positioning of the structure on site was a prime consideration in the design approach. Damage to the sensitive coastal thicket had to be limited to a minimum. The views had to be captured. A deep setback from the street with the house down along the slope presented an opportunity to maintain the existing character of the street frontage – natural bush in this case – with only a hint of activity behind. The existing dense vegetation is used as a natural screen from the road with only a pathway leading one down.

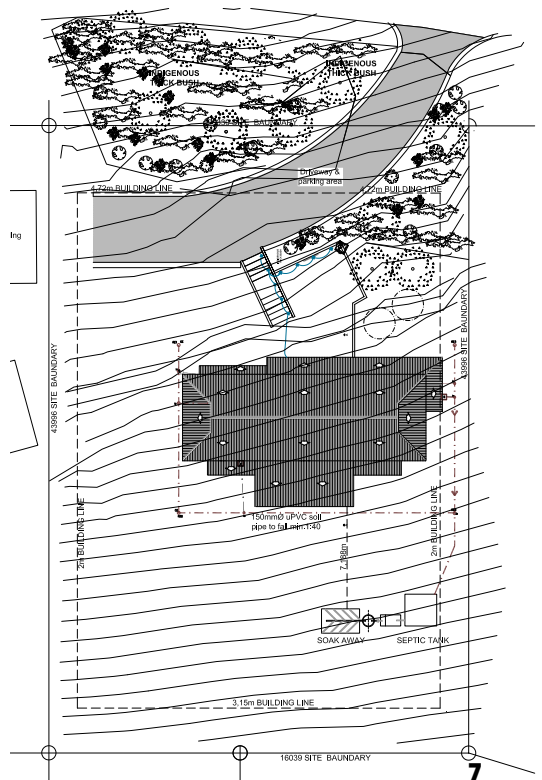
The home is ordered around an open living space (including kitchen) flanked by bedrooms on either side.

The elongated east-west footprint allowed for large doors and windows on the northern façade to capture the sunlight and warmth. Particular attention is paid to the handling of openings to support the natural flow of the house. This contributes to the feeling of open space and applies to movement inside the house itself but also from inside to out.

The uncomplicated layout simplified construction and curtailed building costs.

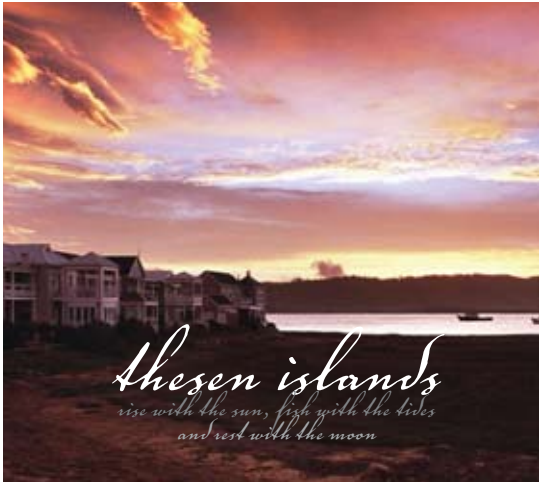
Selecting from an array of classic finishes presented by the contractor, the owner created a natural and relaxed 'shelter' that would serve as a holiday retreat at first. Phase 2 would link to a granny flat and studio to create a more permanent Brenton home.

Congratulations to the owners. Happy days from the CMAI team!



thesen islands publication_

"...rise with the sun, fish with tides, rest with the moon..."



"Thesen Islands is not a book about design and décor. It is about a journey, a vision and a passion that led to re-defining urban living. In an era where development is often linked to hasty conception and construction, often with little heed paid to the environment or how contemporary communities would like to live, Thesen Islands stands out as revolutionary.

It was blessed with the single-minded and indomitable vision of one man, Dr Chris Mulder. It became not simply a housing project in a highly ecosensitive location but an extension of the life he and his family longed to live. Perhaps it was this personal desire for a gentle, fulfilling life, of peace, nature, harmony and real sense of community that set Thesen Islands apart from any other

development undertaken in South Africa. It is undoubtedly unique.

This book tracks the 10-year quest, from environmental impact studies to the final interior design and landscaping of the ambitious project. It is written as a narrative to inspire and inform, with photography that exquisitely captures the nuances in light and atmosphere, the spirit of the community and the essence of why it is a shining example of a successful balance between aesthetics and ideal, of environmental sensitivity and architectural prowess."

*Excerpt from Thesen Islands
Written by Dr. Chris Mulder & Les Aupiais
Quivertree Publishing*

Launch to be held in July 2008

cmai staff introductions_



CEO: Dr. Chris Mulder (left)

Left row (left-to-right) Eugene Marais (director), Thea de Neef (PA to Chris Mulder), Catherine Kampher (barista & domestic engineer), Mike Louw (director), Steff Mulder (director), Alex Hendricks (senior architectural technician), George Kinuthia (architect), Liezl Verfuss (interior design), Vernon Koekemoer (client liaison/enforcer), Werner van Schalkwyk (architectural technician)

Right Row (left-to-right) Lana Roux (administration), Margot Jane Sounes (architect), Hildegardt Marais (senior architectural technician), Cordia Louw (director), Virna Jacobs (administration), Yolandi Boshoff (administration), Gareth Leonard (architect), Tiaan Smith (architectural technician)

In absentia: Kaye Edwards (landscape architect), Quincy Crow (landscape architect), John Hodgson (architect)

Congratulations to both Tiaan Smith and Gareth Leonard, for various awards received from the Nelson Mandela Metropolitan University.



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