

Island development



Leading project

Thesen Islands, located in the heart of the Knysna lagoon, is the largest marina development in South Africa, comprising a private estate over 19 islands

Right: Old world charm is a facet of the ambiance of the island.
Below: The Thesen Island development spans a mammoth 90 hectares.



After nine years of planning and design, (and seven years of construction) the islands in the Knysna lagoon are a reality, with wide waterways, attractive arched bridges, sandy beaches and private jetties. Thesen Islands is a 90 hectare (224 acres) waterfront estate of 19 islands – 18 residential and the Old Thesen Harbour Town Village Centre. Before the current development began, Thesen Island was used for lumber milling and wood treatment operations, with a smaller component of industrial activities associated with the lagoon, including a harbour, oyster farm and boat building yard.

Upgrading of this area started with the development of the Knysna Waterfront in the 1990s. Based on the phenomenal success of Victoria & Alfred Waterfront in Cape Town which showed a renewed interest in waterfront sites, Thesen Islands formed part of the redevelopment and upgrading which has been taking place in Knysna.

Originally owned by the Thesen family and later acquired by Barloworld, the island was formerly home to a timber factory and

pole treatment plant. Chris Mulder Associates Inc (CMAI) proposed a redevelopment of the island in 1994 and spent the next four years working on the proposal until approval was granted at the end of 1998. The Thesen Islands Development Company was formed and bought the property from Barloworld the following year.

Dr Chris Mulder of CMAI earned a doctorate in Environmental Design from Texas A&M University. In 1980, he earned his doctorate and returned to South Africa to launch CMAI, a multidisciplinary firm employing land and environmental planners, architects, landscape architects and urban designers. Over the years, through CMAI, Mulder has earned numerous awards from the American Society of Landscape Architects and other US and South African professional associations. In 2002 the Texas A&M University's College of Architecture nominated Mulder as a 'Distinguished Alumni' as recognition for the work done by the firm over a 22-year period.

Preserving the historical heritage

"We obviously researched the heritage and history of the island in detail before commencing the planning and design," says Mulder. "Work commenced and we kept on researching throughout the project." The approval process took a long time and Mulder and his colleagues had to demonstrate to the authorities that the heritage of the area had been considered. "We also realised that the use of the historical buildings

The apartment island, which was previously home to the Dry Mill.

would add a significant ambience, marketability and spirit to the lifestyle we wanted to create on the islands," he says.

A conscious decision was also made to retain as many of the original historical buildings and the industrial parts of the architecture such as gantries, crane tracks, smoke stacks and historical features as possible and integrate these into the urban design.

"We kept the Boatshed building which is now a shopping mall and boutique hotel. The Plywood building was also retained and became a three-storey parking garage with the top floor doubling up as venue for the many festivals which take place in Knysna, such as the oyster festival," explains Mulder. "We also retained and refurbished the Sawtooth building into shops and restaurants and the power station into an environmental technology centre and special commercial space. The Dry Mill is now being converted into an apartment block."

The redevelopment of the island has now resulted in a mixed-use precinct comprising residential, commercial and entertainment facilities. Comprising 90 hectares of private estate spread across the 19 man-made islands, the area is surrounded by tidal waterways and linked by bridges. In total, it consists of 522 freehold stands, the aforementioned Dry Mill apartment island, landscaped park, and a commercial and retail centre called Thesen Harbour Town.

Mulder designed Thesen Islands based on Traditional Neighbourhood Developments (TND), which focuses on the development and sustenance of communities. "Our firm believes that neighbourhoods and neighbourhood





Leading project

set backs, building lines, deck areas, veranda zones and bulk coverage. This set of documents was attached to the design guidelines, and all of these formed a part of the sales contract," says Mulder. By doing this, the firm could ensure that the urban design and the urban and architectural language they wanted would materialise over the four-year building time limit that was stipulated. These measures, plus a very tight planning approval mechanism, ensured that the exact development that was envisaged occurred.

A pre-approved panel of architects was allowed to design houses on the islands. They were selected because of their sensitivity to the TND designs which were chosen. "If we do a similar project of this large scale in the future, and we have five of them on our drawing boards at the moment, I would preselect the participating architects again, but this time I would let them participate and buy into the writing of the guidelines so that they know exactly what is required and expected. This way, they will not try and find ways to work around the design guidelines," he says.

Architecture

Architecturally, the design guidelines of Thesen Islands regulate the architecture as 'colonial maritime'. This decision was made to provide a connection with the historical vernacular of Knysna and its seafaring tradition. Also popular on the east coast of America and Australia, and finding prominence in Knysna itself, the buildings take their inspiration from the land and seascape around them. The palette of exterior home colours is also inspired by the natural hues of the Knysna estuary – the greens of the hills, the blues and the greys of the sea and sky and the neutrals of soft sand and shells. Three of the CMAI architects who worked on the initial designs with Mulder, namely Steff Mulder, Mike Louw and Cordia Boshoff are still with CMAI and have now become partners in the firm. They were involved in the design of the majority of houses and structures on Thesen Islands.

The strict guidelines on the architectural designs created a consistent precinct by regulating building positioning, shape and design. All other details in the landscape such as the signage and bridges, complement the architecture and create a homogeneous community. The emphasis is on simplicity, scale and proportion, harmony and refined details, while timber verandas, decks, boardwalks and gazebos make the most of Knysna's gentle climate.

Recycled timber, from existing buildings that were broken down, was used extensively for structures in the landscape. "Thesen Islands used to

The typical architecture that is found in the residential units.

living should and will shape the way people live in the future," says Mulder. "Traditional towns and villages with walkable communities are sought after. People go overseas to vacation in European villages where the streets are narrow and the houses are close to one another. They come back and tell everybody how great it was, yet we tend to shy away from it. We decided that this concept has merit. We attended several workshops, master classes and conferences worldwide on this concept over the years and we then adapted it to suit our local conditions," he says.

The common open spaces created in a TND neighbourhood also serve a great purpose. In Thesen Islands, almost 40% of the total land mass is used as urban or community open space. Twenty-five hectares of water open space (canals) was added to the quantum of the Knysna lagoon.

"Of course we took a gamble in taking a radical, for South Africa at the time, concept like this to the market. But we designed every single stand. We prepared a site plan and a regulation plan stipulating every single entrance,

be a lumber factory, sawmill and wood product factory for over a century," explains Mulder. "We bought and took over a 100-year-old factory, waste site, chemical waste, 70 000 cubic metres of wood waste and hundreds of structures assembled and modified over a century. We designed and manufactured all the light poles, bollards lights and signs from local wood, made by local artisans and only the light fittings were bought," he says.

The existing buildings were also totally integrated into the design. The gantries were used and integrated with the 'gantry houses' and a second gantry was used to accommodate the main pedestrian route from the residential area into the commercial area with hanging arch bridges suspended in the gantry over the canals. Streets were formed to allow run-off rainwater to flow into vegetated swales and therefore provide natural irrigation for the landscape.

Environmental issues

Environment concerns were addressed in a number of unique ways according to the opportunities and constraints of the site. Developed on a previously degraded and polluted site, Thesen Islands, unlike many other developments, actually contributed to the benefits which the region offers, as well as stimulating economic growth and the upliftment of communities. Much of the project was aimed at rehabilitating land polluted by the lumber milling activities.

The Conditions of Approval for the project called for stringent control to the areas disturbed during construction, in particular areas associated with the ecosystems of the greater Knysna estuary identified as being ecologically sensitive. "Being an environmental treasure, the development needed to be undertaken with great sensitivity and within strict parameters so that its natural beauty was protected," says Mulder.

The landscaping is natural, with the extensive planting of carefully selected trees, shrubs and ground covers and the 11 hectare Parkland and Bird Reserve is a magnet for the rich birdlife of the Islands. Walkways and bird hides built along the parklands encourage residents of the Islands to take an active interest in the ecosystems.

Overcoming problems

Once the site was cleared, the average contour level of the site was 1,2m above sea level, the sewerage pipes were limited and ancient water pipes and electrical services were in existence. "The national convention requires a finished floor level of at least 3m above sea level," says Mulder. Two options surfaced. Put all



An aerial view showing the canals and islands.

the structures on stilts or on fill. "We opted for fill," he explains. "To get the we needed it close by so we started designing canals and waterways. The canals widths, lengths and the depths all had to add up to the required fill amount to raise the entire island to 2,8m above sea level. The velocity of the water in the canals had to be just right to avoid scouring or sedimentation."

"The approvals required that we designed everything on the island to be as labour intensive as possible. The canals were edged with gabion baskets, all packed by hand. The TND design even are relatively small, the streets are narrow and the environment sensitive. The builders were forced to build fences around each building stand, pay a sidewalk deposit, and then were monitored continuously for compliance. Because of the approximately 1,6m fill all over the Islands, no trees survived. Thousands of trees were



The redevelopment resulted in a mixed use precinct comprising residential and commercial facilities.

replanted, supplemented by shrubs and groundcovers – all selected and specified to augment bird habitat," says Mulder.

An 11 hectare park was designed on the former wood treatment site. All the toxic waste was removed to a toxic waste site and the remainder encapsulated on site under the Department of Water Affairs' standards and supervision. A community fruit orchard and vegetable growing area was then added after it had been filled. Today a scientifically managed fruit orchard provides fruit for the homeowners and they are able to grow their own vegetables.

A lifestyle

According to Mulder, "Thesen Islands is a truly walkable community where strangers became neighbours and neighbours became friends, all combined in a truly unique and relaxed lifestyle." That lifestyle can be deemed to be the original goal behind a development such as Thesen Islands. The strong image of island living, seafaring tradition and the historically important timber industry of Knysna is evident in all the finer details of the development.

"A lot of the residents stated at open meetings that they received much more than what they bargained for or expected. Every single architectural, urban design, engineering and landscape detail was designed, coordinated and rechecked before being signed off for construction. This proved to be very successful. The design team and the main contractors and subcontractors worked as a team and looked out for one another. The main contractors as well as the environmental consultants attended every bi-weekly design meeting and in doing so were continuously up to

date with what was being planned and designed. As a result there were no flaws, hiccups or major disasters," Mulder states.

With over nine years in the planning stages, Thesen Islands is a thoroughly researched and well planned residential property project. With the Southern Cape region experiencing a marked increase in the demand for upmarket residential development, Thesen Islands, with its niche lifestyle image and distinctive architecture, is set to provide support to both the environment and those looking to settle in its idyllic surrounds.

On top of this, the project injected more than a billion rand into the local economy over the seven year construction period and will continue to inject millions into the economy after completion. This is in line with the goals of what is expected from a sustainable development project.

Thesen Islands – Project team

- **Client:** Thesen Islands Development Company
- **Project and design coordinators (master planners, urban designers, architects and landscape architects):** Chris Mulder Associates Inc (CMAI)
- **Marketing:** The Fisch Group
- **Project manager:** Integrated Projects
- **Civil contractor:** Power Construction
- **Civil and electrical engineer:** Arcus Gibb
- **Structural engineer:** Niewoudt & Hofmeyr
- **Quantity surveyor:** Steele Consulting
- **Surveyors:** VPM Surveys
- **Environmental control officer:** Pieter Badenhorst Professional Services