



urban · futures

Designing Tomorrow's Neighbourhoods

Vol. 1 No. 2 Winter 2007

Chris Mulder & Associates. The Boatshed. Thesen Islands.

Knysna, South Africa



Walkability: Key to Neighbourhoods of Tomorrow

Walking is good for your health, the health of the environment and the health of your neighbourhood. Walkability is vital to creating a liveable community. It implies pedestrian access to everyday amenities, such as schools, shops, recreational areas and public facilities.

The benefits of a walkable neighbourhood are such that Chris Mulder & Associates (CMAI) has made it a part of their urban development philosophy. CMAI draws from the concepts of new ruralism (see page 7),

new urbanism and liveable neighbourhoods. This allows for CMAI to consider both the residents and sustainability of a development from the beginning.

"In prime areas such as the coastal belt of the Western Cape and choice inland areas elsewhere in South Africa, usable land supply is dwindling," stated Dr. Chris Mulder, CMAI founder. "It is vital for the country's future that whatever land is available be used in the best way possible to alleviate congestion and

Continued on Page 2

Green truths from Gore

'Liveable neighbourhoods also give new life for our democracy. As citizens come together to plan their common future, they realize that they can make a difference right in their own neighborhoods and we open the door to more vibrant civic life and self-government on a much broader scale. That is why smart, sustainable growth must happen at the local and community level.'

- Al Gore, opening of the US Joint Center for Sustainable Communities.





Walkability

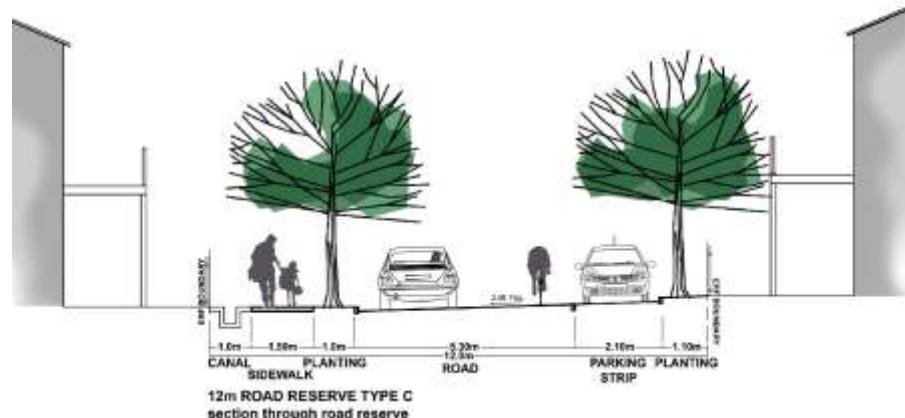
These Roads Were Made For Walking ...

Continued from Page 1

overcrowding, while building communities able to sustain themselves."

In contrast to this philosophy, several developments in the Southern Cape have been hastily planned. The rapid growth in urban population has led to additional land shortages and traffic congestion. The walkability of these developments has become an afterthought. The differences in philosophies can be seen in construction quality, available public space and amenities offered to the community.

The 90ha Thesen Islands Marina, a CMAI development, has 13kms of roadways, cycle paths and walkways across the island connected by 21 arched bridges, four of which are pedestrian-only (see page 8). Residents are able to easily visit each other on foot and walk the short



distance to the commercial and retail center, Harbour Town.

There are many aspects that contribute to a well-planned, walkable community. A few include:

- Wider sidewalks that encourage walking.
- Public benches, shaded alcoves and water fountains that add to the atmosphere of a liveable community.
- Road humps and narrow roads decrease the speed of drivers, which help ensure residents' safety.
- 'Friendly' building frontages onto the street.
- Every house is within comfortable walking distance of neighbours, the commercial center and recreational areas.

These benefits help avoid the problem of urban sprawl. Urban sprawl is the result of unplanned and uncontrolled development through the lack of sustainability planning, post-approval monitoring and control of the approving authorities. Most zoning regulations are still based on size and use, without accounting for the liveability of a community.

'Increasingly, in the 21st Century, a liveable community will be an economically powerful community: a place where a high quality of life attracts the best-educated and trained workers and entrepreneurs. A place where good schools and strong families fuel creativity and productivity. A place where the best minds and the best companies share ideas and shape our common future.'

Al Gore



The average, suburb family of four spends on average 26 hours a week traveling to and from work, school and play. This accounts for over 15 percent of one week and over 23 percent of an average person's waking hours. By choosing a liveable community, a resident gets this time back and conserves fuel, energy and the environment.

Continued on Page 3



CMAI planning integrates 'new ruralism'

Continued from Page 2

Liveable and walkable neighbourhoods incorporate local heritage and character into the design of the architecture and landscaping. This helps foster a sense of ownership and pride in a community.

CMAI and Dr. Mulder have supported and built upon the liveable neighbourhood philosophy for over 25 years. Dr. Mulder believes "planning is how to shape a sustainable future for both people and the environment... for social upliftment and economic growth without undermining our natural resource base.

"People who are financially independent and don't have to travel to work, must understand the necessity for providing liveable housing in decent neighbourhoods for working people. If we cannot succeed in creating walkable, liveable and affordable neighbourhoods not dependant on car travel we will not succeed in solving our housing problems."

CMAI's residential developments display examples of walkability and liveability. These developments include:



- Maselspoort outside of Bloemfontein (see page 4).
- Thesen Islands in Knysna.
- George Rex Place.
- Proposal for the re-design of Lower Central Knysna.
- Kurland, The Craggs
- Flamink Vlei on the West Coast

To find out more about CMAI and their projects, visit www.cmai.co.za.





Maselspoort

Famous Resort Gets New Lease on Life

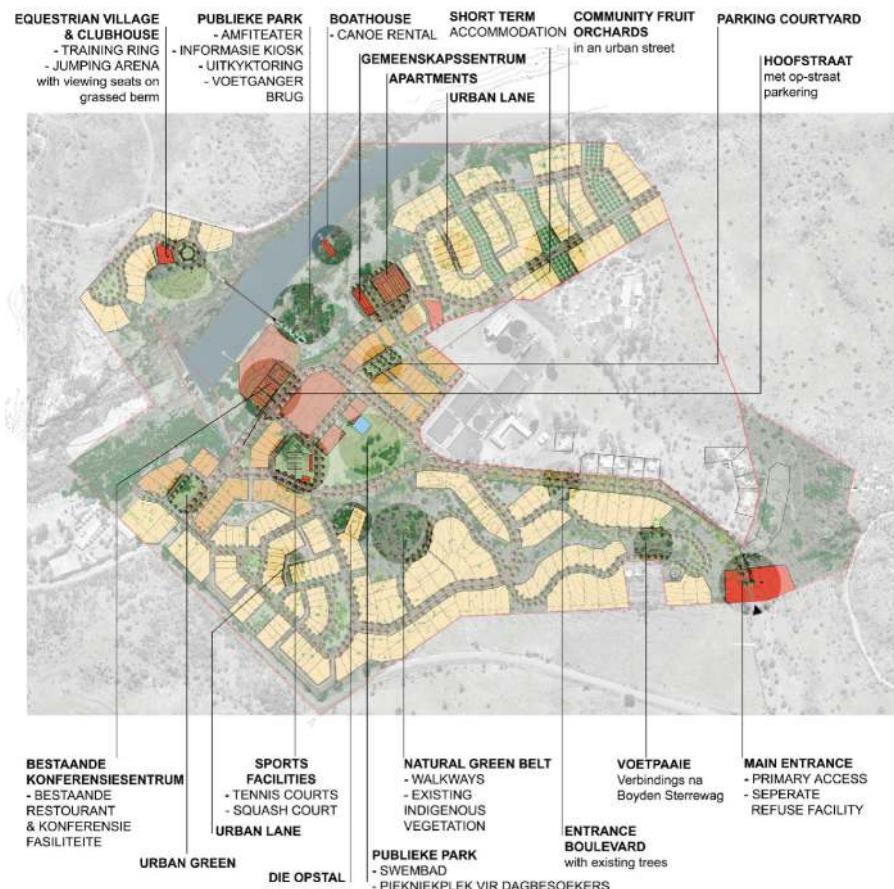
Maselspoort, outside Bloemfontein, was one of the country's most popular inland holiday resorts. Between 1904 and the 1980s, it was the inland "Durban by-die-see" for thousands of farming families from the Free State and old Transvaal.

Over time, changing holiday patterns, rising costs and dwindling visitors took their toll on the resort. New owners were able to restore the 2,000ha resort to its former glory; however, social and economic pressures soon forced the owners to take another look at the future of the resort and consider major redevelopment through Chris Mulder & Associates (CMAI).

The proposed redevelopment will include updated recreational facilities, a housing center and a commercial center. The entire development will be based on the New Urbanism, including liveable neighbourhoods (see cover story) and New Ruralism (see page 7).

CMAI is paying attention to factors such as heritage, natural vegetation, resources, access and residential services. The vision is of a rural resort existing in complete harmony with its environment, a back-to-nature paradise that offers residents and visitors all the comforts and conveniences of modern living.

The resort will be set in a landscape of extensive gardens, pedestrian-friendly streets and riverside recreation, with the ultimate objective of creating a harmonious community. It will comprise of 400 homes, designed to fit with the surroundings, a full range of recreational facilities and an 8,000m² commercial and trading center that will feature a major conference center.



The National Heritage Resources Act and the Environmental Conservation Act require that all the old and historic buildings be restored, and structures of architectural significance be recycled and reused. These include the beautiful old water works, manager's house, restaurant and graveyard.

The natural veld will be retained and alien vegetation removed where appropriate. The section of the Modder River, adjoining the recreational area, will be rehabilitated. The water supply will run along side the Maselspoort Water Works that supplies the City of Bloemfontein. An additional reservoir will be installed to

provide sufficient pressure and 48-hour emergency storage. Borehole water will be used for irrigation. New electricity transformers and an underground electricity distribution system and cabling will supply Maselspoort with bulk electricity.

The once-off, socio-economic impact of the redevelopment will involve a R1,1-billion capital investment. New business sales from services and products, largely from local SMMEs, is expected to top R3-billion, with more than 9,000 new jobs created, mostly from the local community.





Current Projects



Above:
Geelhoutboom - George

Changing Face of Knysna, Fresh Start for Fallow Farms

Urban:

Chris Mulder & Associates (CMAI) has undertaken a study for the enhancement of lower Knysna's central business district and industrial center. It focuses on appropriate changes in land use and development parameters. The aim is to transform the area into a mixed-use precinct with a strong residential and tourist attraction in a vibrant, safe central town area in keeping with the liveable neighbourhood philosophy (see cover story).

'This movement across the country is showing us how we can build more liveable communities: places where families work, learn, and worship together where they can walk and bike and shop and play together or choose to drive and actually find a parking place! and get out and have fun.'

- Al Gore



Rural:

The concept of New Ruralism (see page 7) is incorporated into several of CMAI's developments, including:

- Gouritzmond.
- Kurland.
- Geelhoutboom Estate.
- George Rex Place.

Pictures of these developments can be seen in this newsletter. Old farms are being consolidated and redeveloped into profitable, community-owned commercial farms.

Top 1 & 2: Oyster Walk - Knysna
Bottom 3 & 4: George Rex Place - Knysna



Pezula architecture from CMAI



Making a Dream House Come to Life

The dream house:

A four-bedroom, courtyard house.
A large, south-facing living area.
A bedroom on either corner of the first floor.
A double-volume, south-facing apex window with views of the Indian Ocean.
Smaller openings and gables to match the apex.
Numerous patios.
Water features including a splash pool.

The design:

All rooms are arranged around the central north-facing courtyard. This ensures that each bedroom and living area has good views and sufficient light, while being protected from prevailing winds.

The large living areas spill out on to covered verandahs and open patios to make the surrounding landscape part of the house. A waterfall in the courtyard falls in a long stream that flows to the other side of the living room where it cascades into a splash pool. All plants are indigenous, and materials used on the house include local sandstone and charcoal slate roofs to blend with the natural surroundings.

The sustainability:

The house is north-facing for maximum sun, and the courtyard acts as a "sun well" for the entire house. All rooms have cross-flow ventilation, which cuts air conditioning costs. The roof overhang is designed to block the harshest of summer sun, while allowing in the winter sun.

Roof insulation, along with thermal mass from the thick sandstone walls, keep inside temperatures constant. In the summer, water features keep the house cool when the windows are open and allow for the air to circulate through the house. The windows in the apex and the courtyard are made of self-cleaning glass, which eliminates the need for cleaning.

Rainwater from the roof is trapped and stored in two 6,000-litre, underground tanks for irrigation. Waste water is treated in an underground Biolytix system that breaks it down organically. It is also used in the irrigation system.





New Ruralism

Community-Owned Farms and Villages

Chris Mulder & Associates (CMAI) is introducing a revolutionary plan to construct new rural developments around scientifically planned and managed farms. The plan could mark a turning point for future development on the Garden Route.

New Ruralism, as the concept is known, is expected to produce a new generation of community-owned farms and farmers in the region. The thinking is in line with current government ideas on public-private partnerships solving the challenges of housing and land reform. The principles of new ruralism have been adapted in South Africa to cater to the unique and complex housing, agriculture and population challenges.

Farm developments follow the same economic structure as golf resort developments. Instead of owning a share in a golf course, homeowners will own a share in a scientifically managed and profitable farm.

This plan is the result of years of collaboration by CMAI with top economists, government and university planning experts, agriculturists, social scientists, community leaders, architects, landscape designers, botanists and ecologists. The original thinking behind the concept is from Dr. Chris Mulder, CMAI founder, and his team of award-winning architects, land planners and designers.

"The days of exclusive golf course developments in the Southern Cape are seemingly coming to an end," says Dr. Mulder. "There is just too much competition for other land uses and not enough available land or resources to sustain such developments indefinitely. Already local and provincial government is hard-pressed to find land and provide housing for the fast-growing population, and future residential developments will depend on how well they meet these challenges."

Such community-owned farm developments may bring a new lease of life to agricultural areas that are presently lying dormant and provide income and housing for local communities. For

example, a suitable area may contain large, unprofitable farms that have been subdivided over time into smaller farms and plots. On their own, they are not able to grow, provide subsistence living or have been abandoned and left fallow. Local farmers seldom have the capital to pay for basic improvements, never mind agricultural studies, feasibility models, business and market development.

High-potential farming areas are identified, along with a potential "champion" crop or product and a panel of specialists in numerous disciplines develop a model for the enterprise. Smaller farms and existing settlements may be consolidated into one large, sustainable farm, and the settlements incorporated into a single, viable and attractive rural village.

The villages include a full range of social amenities from education to health care, with libraries, clinics, schools, shops and recreational facilities, plus all domestic services. Such developments are planned so that the infrastructure required to set up the farm is pulled from the income of the associated land development, the same way as a golf development.

Three upcoming developments that incorporate such principles include:

1. The 1,300ha Gouritzmond Agri-Development at the Gouritz River mouth, includes an aquaculture facility.
2. The 1,000ha Geelhoutboom Estate near George, includes a large commercial farming component.
3. The 2,300ha Kurland Estate, outside Plettenberg Bay, has been planned to transform and uplift the entire community of The Crags, including the current Kurland Village of almost 4,000 inhabitants.

CMAI is currently investigating similar opportunities on the West Coast and the Eastern Cape.

Dr. Mulder is adamant that the full economic and growth potential of the country will not be realized without developing rural areas in parallel with urban areas. "Prime agricultural land will be treated as 'sacrosanct' and developed as such, as will wetlands and



environmentally sensitive areas. The remainder will be used to for rural housing development and creation of an agri-based lifestyle."

New Ruralism is in line with government triple bottom line thinking on new developments and the environment. It delivers big on all three points: social, economic and environmental sustainability.

Owner of the Kurland Polo Estate and former Anglo-American executive Clifford Elphick said, "We see Kurland as a model of how private land development initiatives can help uplift an entire community, especially within a rural context. Developers bring capital, agricultural science and technology and expert management to ensure the viability of a project. The existing community is given a full equity share in the farm and a larger self-sustaining community is created. Furthermore, none of this development costs the government a cent."

Dr. Mulder has been invited to present his planning strategy at the International Summit on Collaborative Partnerships for Built Environments at Texas A&M University later this year. Dr. Mulder is hoping that New Ruralism will assist State policymakers in land reform planning for rural development and facilitate the development of self-sustaining rural hamlets and agri-communities in South Africa.



CMAI Receives SAISC Awards

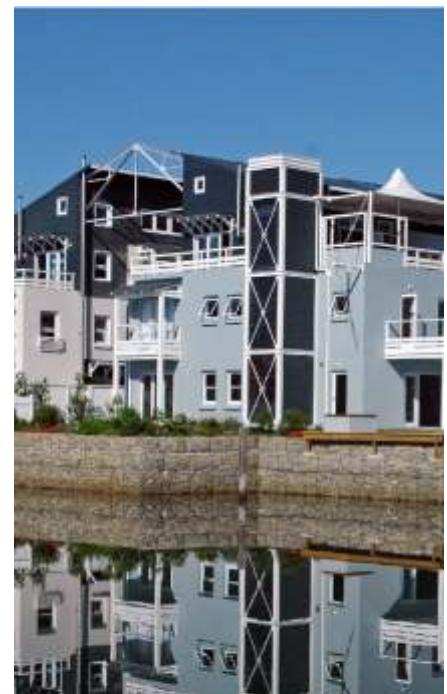
The Chris Mulder & Associates (CMAI) architectural team faced a unique challenge in the redevelopment of the old industrial steel structures of the former timber-processing factory on Thesen Island. The structures included the dry mill, with its classic steel-frames, latticed crane columns, roof trusses, open crawl beams constructed out of portal frames, open crane gantry with large plate girders and a classic portal frame building with a mansard-type roof for natural light.

The architectural team saw an opportunity to retain the main structure of the three dry mill sheds and convert them into two sets of two or three story apartment complexes. Each set make uses of the old latticed columns to create unique features within the apartments.

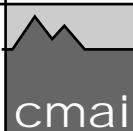
By retaining the outer portion of the roof trusses and purlins, no new roof supports were necessary. The middle of

the roof trusses were retained to act as a trellis link over the driveway separating two blocks. Features such as lift shafts, covered patios and tensile structure supports demonstrate the use of steel to add decoration in a functional way.

The new monorail pedestrian bridge (see above) was inserted into and suspended from the Monorail gantry, which was formerly used as a track to move timber to and from the kilns. Most of the existing structure was kept in place. The bridge, which joins the residential area to the commercial center, is separated by two canals. This coincides with the planning aimed to increase walkable routes on the island. The bridge was declared to be a superb example of how old, neglected industrial structures can be adapted and used as an integral part of redevelopment projects. It is a functional and "recognizable sculptural element that retains a sense of history."



**Southern African Institute of Steel Construction
Award Winner: Recycling and Sustainable Projects,
Thesen Islands Re-Development**



No1, The Boatshed, Long Street, Thesen Islands, Knysna
PO Box 2498, Knysna, 6570 • www.cmai.co.za
Tel +27 (0) 44 382 6732 • Fax +27 (0) 44 382 1184
cmengine@theboatshed.co.za