

ANDREW HORN, CAPE TOWN

Andrew Horn (*1969 in Isle of Wight, GB, lives in Cape Town) grew up in Swaziland and studied at Cape Town University and founded Eco Design practice in 1998. Horn's work focuses on ecological architecture, combined with natural building and indigenous construction methods. His vision is for ecological architectural practice becoming a substantial part of new South African Society. Horn has summarized his Eco Design practice under the heading of MANIFESTO, covering six broad principles of ecological design. *Socio Economic*: Promoting social, economic & cultural upliftment. *Land*: Respectful & in symbiosis with the local environment & its resources. *Water*: The protection, conservation, efficiency & re-use of water. *Energy*: The conservation, efficiency & renewable use of energy. *Health*: Non-polluting environments & healthy materials. *Holism*: Holistic & intrinsically recyclable. During the construction process, different workshops are organized at the construction site with the aim of demonstrating to all involved how buildings can be completed with extremely simple means, local environmentally benign construction materials and the tools readily available. New technologies (solar energy) are combined with traditional and modern natural building methods (clay earth straw walls, locally harvested timber poles structures, thatched roofs, stone, locally made sun-dried bricks etc).

Selected projects: Manifesto - 6 Broad Principles of ecological Design; House Prinsloo, Verlorenvlei Farm, Elands Bay, 1998; House Geysers, Alterations & Additions, Vredehoek, Cape Town 1998; Mud Gallery, Barrydale 2002-04; Twinstream Environmental Center Staff Housing 2003-04; Seven Fountains Primary School, Earth building & Natural plastering Training Workshop, Kostad, Kwazulu-Natal 2006-07; Wolvekloof Academy, strawbale building training workshop, Ceres 2006; Stanford Valley farm, natural building training workshop 2006
<http://www.ecodesignarchitects.co.za>





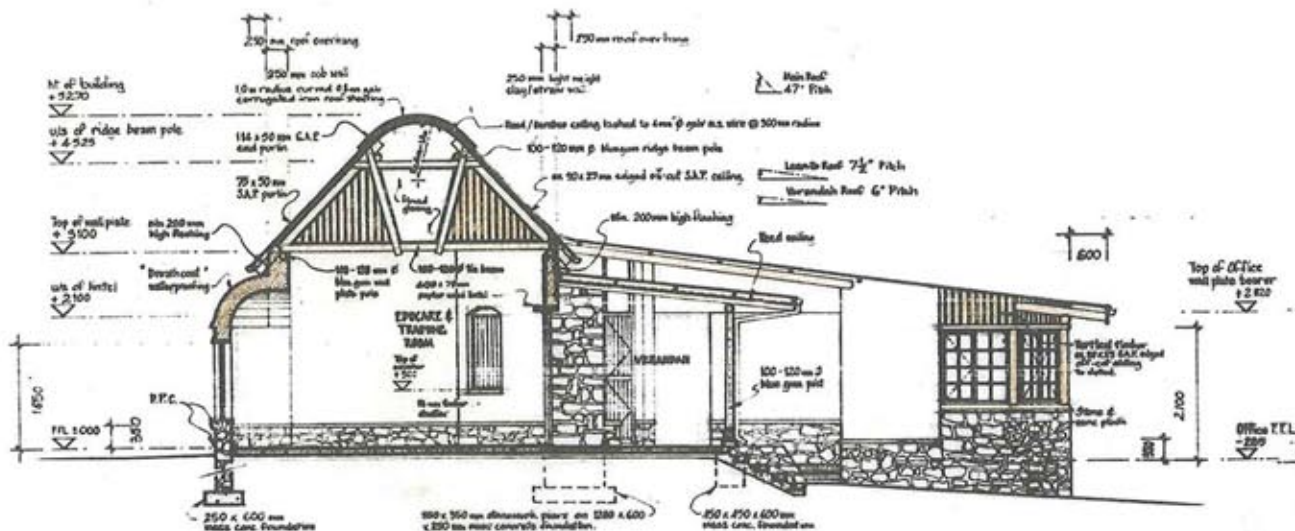
FLOWER VALLEY EDU-CARE CENTRE, GANSBAAI, SOUTH WESTERN CAPE, 2001-2002



The brief was to create a multi-purpose Edu-care Centre on a fynbos flower farm near Gansbaai. The idea was to create an L-shaped plan and roof form so as to create a wind free zone for outdoor teaching. Furthermore by using local and recycled material the idea was to maximize the involvement and education of the local farm labourers, showcasing an environmental approach.

The use of cob, stone and timber pole construction meant that most of the material was gathered from the building's immediate surroundings. Even the doors, windows and cut timbers were recycled from an old farm shed.

Cob (a stiff mix of clay, sand and straw packed directly onto a stone base) as a material provides an ideal medium for the sculpturalness of the forms.



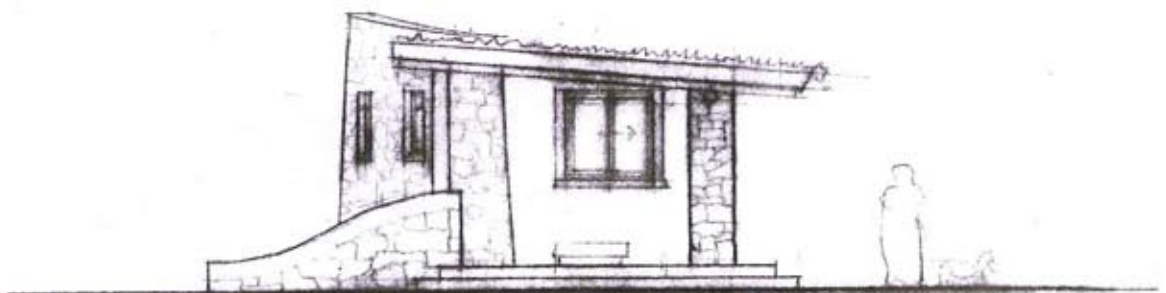
NIEUWOUDTVILLE CARAVAN SITE UPGRADE, NORTHERN CAPE, 2004-2007



Set in a bio-diversity hot-spot known as the “bulb capital of the world”, this project arose from a week long community participation process that set out to conserve biodiversity while promoting economic opportunity through skills training and tourism development. With the aim of creating an environmental showcase, the architectural brief included the development of a new gatehouse, 6 new chalets, a new ablution facility and renovations to the existing ablution block.

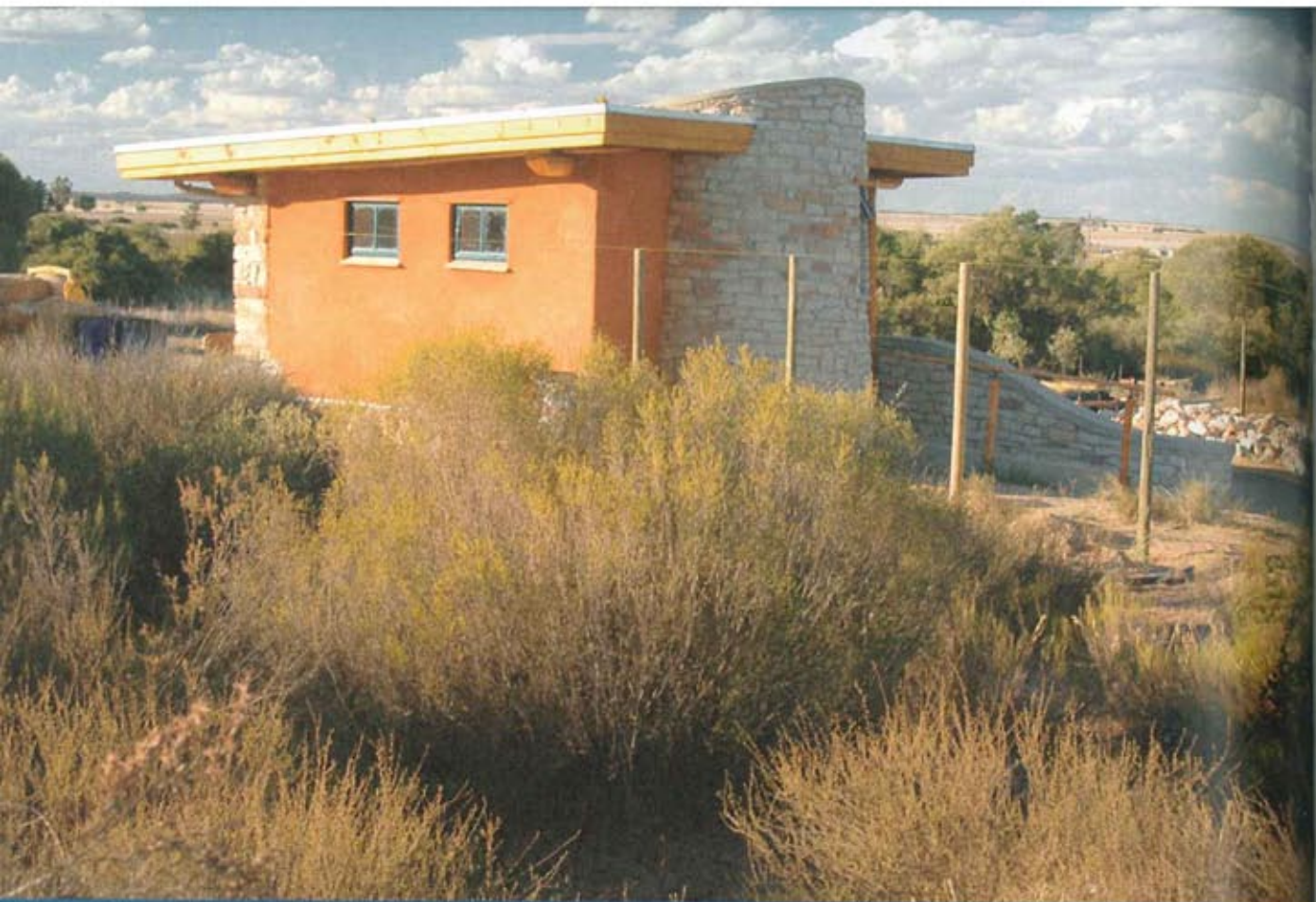
The design strategy makes use of locally available natural materials to minimize environmental impacts while maximizing community involvement and local job creation. Furthermore the forms and materials create a strong link to the cultural and natural landscape. Rubble trench foundations utilize building rubble from the town dump, minimizing the use of concrete while helping create extra jobs on-site.

The buildings are constructed of locally harvested timber poles and local stone, which is in-filled with super-insulating clay and lime plastered straw bales. Roofs are planted with local succulents and bulbs. Services utilize solar water heating, dry composting toilets, constructed wetlands and rainwater capture helping to minimize running costs.



East elevations





GENIUS LOCI – SPIRIT OF THE PLACE
CONCEPT – THE CIRCLE AND THE
RECTANGLE

Drawing inspiration from the rich cultural context, it became apparent that the circle and the rectangle were very dominant forms. In a contemporary interpretation of these humble forms the concept of planted roof lean-to type structures intersected by tapering stone cones was born.



CONES - CORBELLED HOUSES

These stone structures were probably the first permanent buildings by the early white settlers, who were limited by a lack of available timber. A few of these structures can still be found in this area.



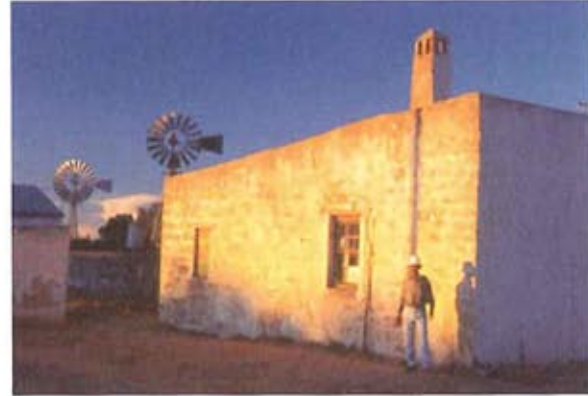
RONDAVEL HUTS

Originating from the thatched domes of the Bushmen people, the rondavel form is still currently in use on some of the freehold title land such as Melkraal.



LEAN-TO

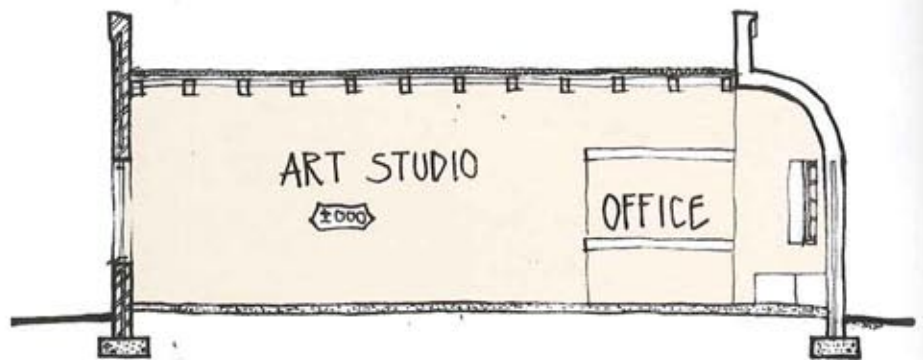
Humble lean-to type structures are typically built with mud, stone, walls and pole, reed and mud roofs. More recently the mud roofs have been replaced with corrugated iron and walls are now typically built of concrete block.



HOUSE LIJNES, ALTERATIONS & ADDITIONS, NOORDHOEK, CAPE TOWN, 2001



In the alterations to House Lijnes in Noordhoek Valley, an ancient Egyptian method of construction was used to build an inspiring 6,0 meter diameter domed space without using formwork. Non-toxic paints & finishes were used extensively. Glass bottles were recycled in the creation of a central chandelier and colorful patterned fanlight above the front door.



Section C-C



North elevation

