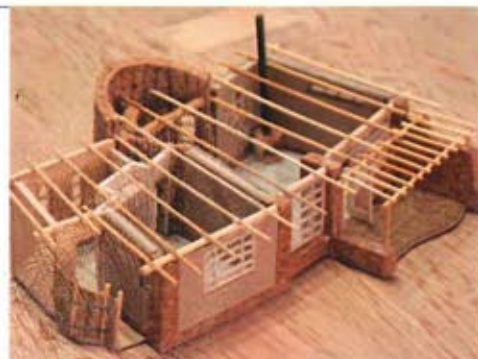


This one bedroom chalet has been designed to be as environmentally friendly as possible; it's built with local natural and non-toxic materials, and energy and water efficiency in mind.

The chalet is approached from the south and opens onto a private terrace on the north side. To keep the interior temperature of the house comfortable, the openings on the east- and west-facing sides are minimized to prevent excessive solar gain. The north-facing openings have good overhangs and a pergola covered with a deciduous plant provides shade in summer but lets in the sun during winter. To reduce energy use, a close-coupled solar water heater is used, light fittings are low energy LED and the showerhead is a water efficient type. A dry composting toilet saves water and all grey water is recycled in the garden via mulch pits with a simple branched drain system.

Rubble trench foundations are used with rubble sourced from a nearby dump. This helps reduce the use of concrete by about 75 per cent and can be done using unskilled labour. The main walls are non-load bearing earth- and lime-plastered straw bale, providing superb insulation. For protection they're built on a plinth of locally-sourced stone. The cone is also built with local stone and the bathroom is built with recycled bricks. The radiating roof structure and *latte* screen uses non-toxic boron treated poles with a natural oil finish. The roof is planted with local succulents, assisting with insulation and helping to maintain the earth's biodiversity. The walls are finished with non-toxic breathable paints.



ECO DESIGN ARCHITECTS AND CONSULTANTS



Andy Horn



Ann-Marie Moore



Ansgar von Oertzen



Charles Palm



Diana Wolder



Quentin Joon

Andy Horn graduated from the University of Cape Town in 1995 and has since built up experience in the field of ecological design. His special focus has always been on the use of local, natural, non-toxic and recycled materials such as stone, clay, sand, straw, reeds, thatch, cob, compressed earth, bottles and poles.

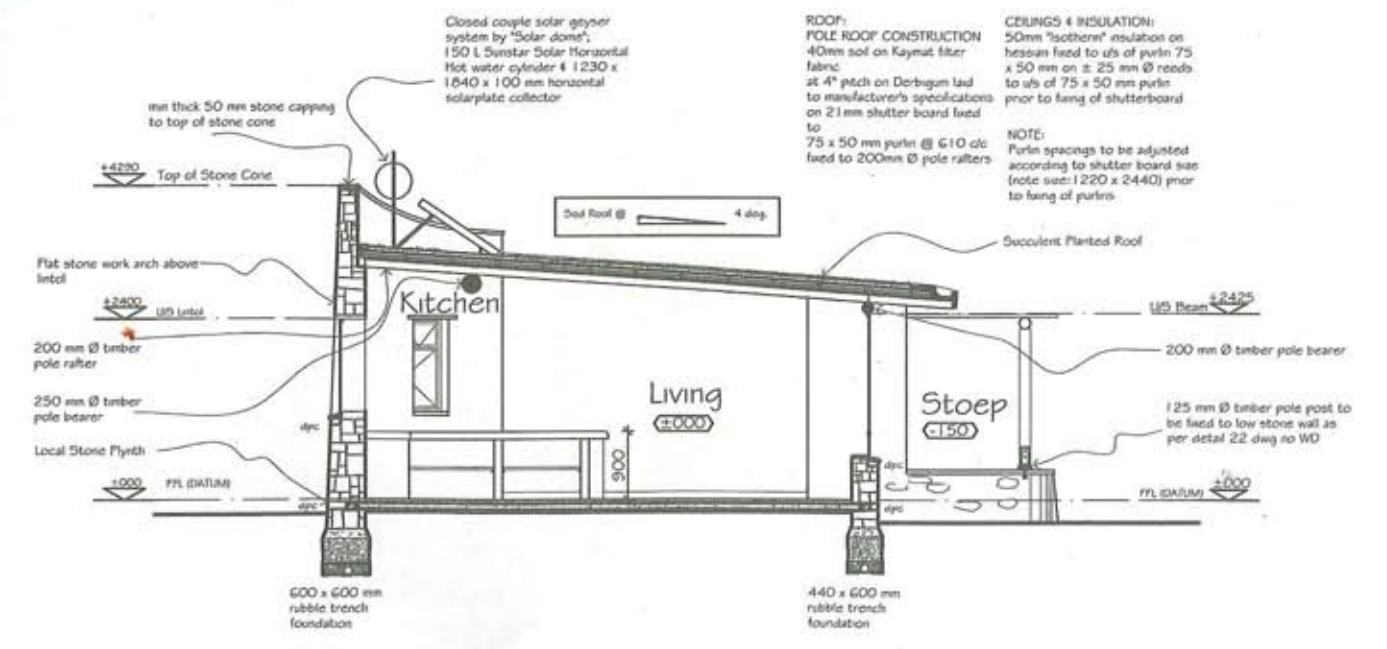
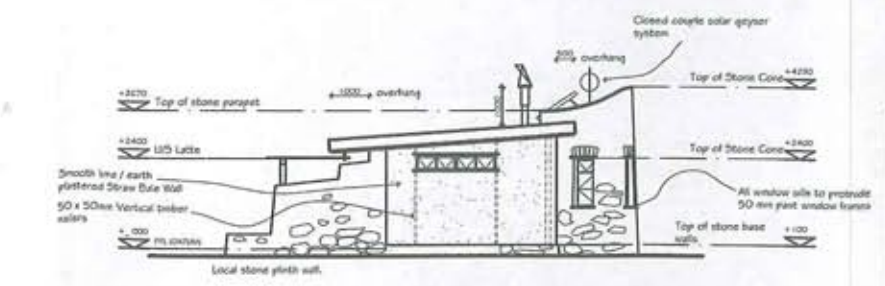
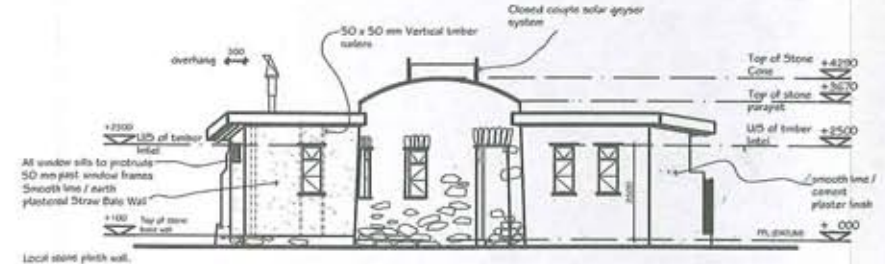
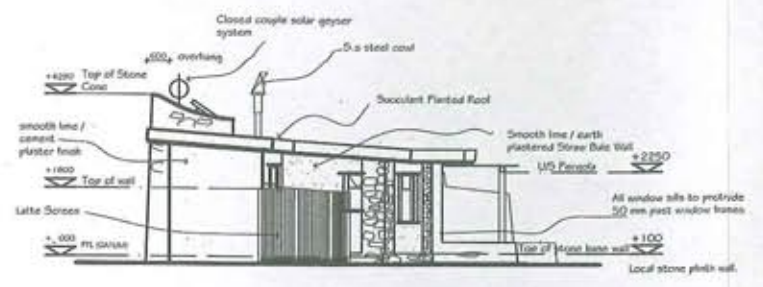
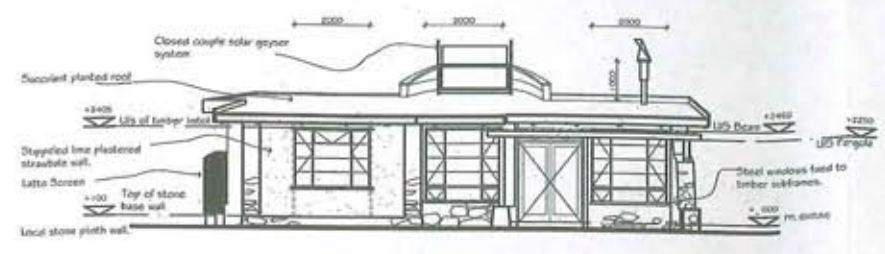
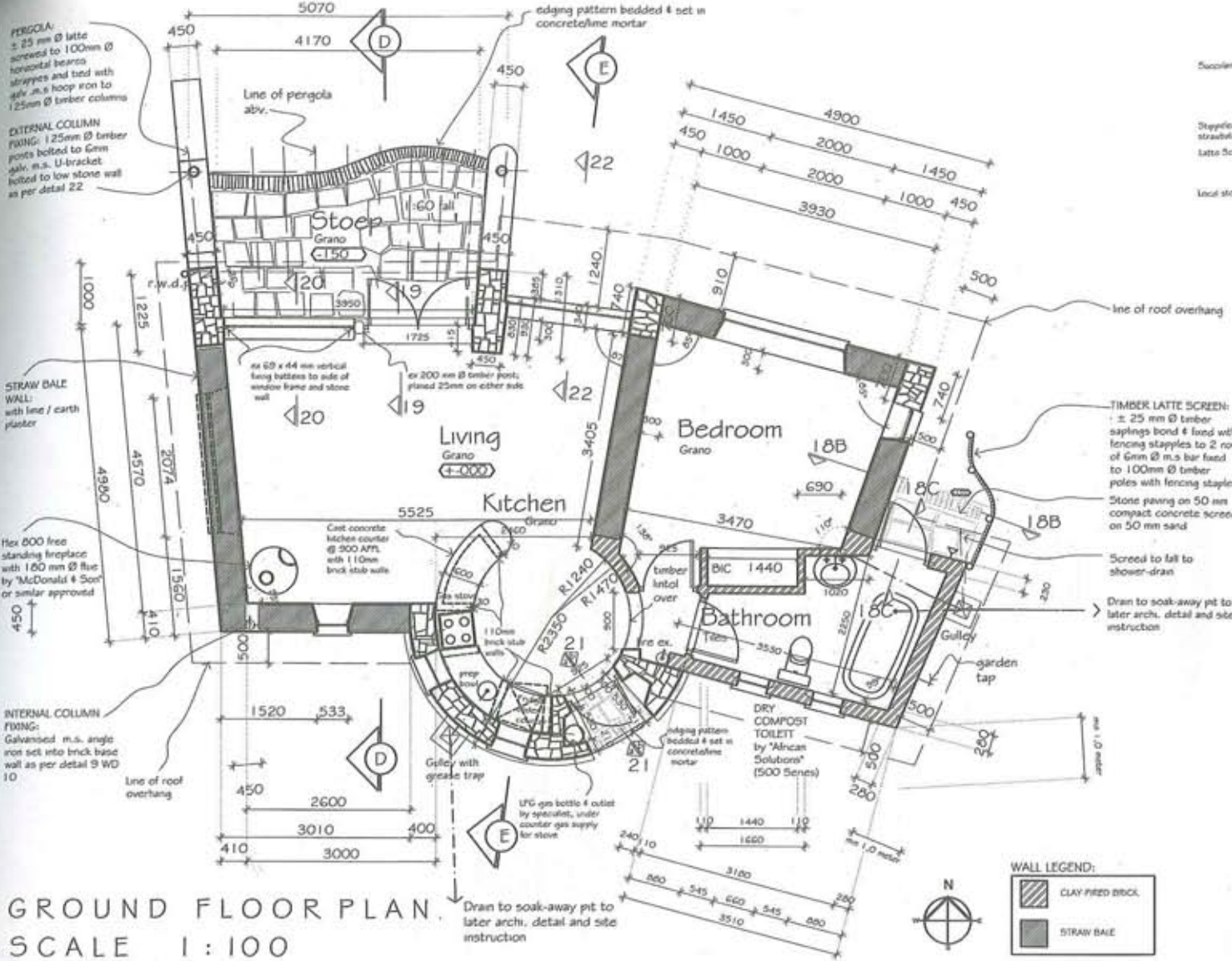
In 1998, Andy founded Eco Design Architects and Consultants out of a life-long concern for the rapidly deteriorating natural environment and widening social inequalities.

Eco Design's first commission as an independent practice was to rebuild an old *langhuis* for actress Sandra Prinsloo. The project used straw bale infill construction techniques which set the tone for much of Eco Design's subsequent work, which has enabled the company to continue to explore and refine the use of natural and local materials.

The use of such materials lends itself to community participation and Eco Design endeavours to support community development and help people with minimal means to gain access to good quality housing. Eco Design has held numerous on-site workshops to train unskilled labour and owner builders.

In addition to being an architectural practice, Eco Design has consulted to a wide range of clients including the Department of Water Affairs, Eskom, Conservation International SA, The South African National Parks Board, International Fauna and Flora, Hantam Municipality, and Mondi Timbers.

For manuals on straw bale and other natural building technologies visit www.ecodesignarchitects.co.za. Alternatively phone 021 462 1614 or email info@ecodesignarchitects.co.za GH



SOUTH AFRICAN
GARDEN AND HOME

ECO DESIGN
Architects & Consultants

A.R.HORN B.A.S.(UCT), B.Arch. (UCT), Pr.Arch (SAGAP), MIA, CIA
4th Floor, The Armoury, 160 Sir Lowry Rd, Cape Town, 7925
Tel: 021 462 1614 Fax: 021 461 3198
info@ecodesignarchitects.co.za
www.ecodesignarchitects.co.za