



# Sustainable spirit

// words john damant // images john damant

It has been said that a good building can only result when there is a meeting of minds between client, designer and builder. I would take it a step further and say another key ingredient is a clear and succinct brief. This small home project had all these ingredients, with a clear direction given to eco- designer John Damant of Arcologic, a passion for sustainability and artwork displayed by client Dr. Nan Broad, and incredible attention to detail by builder Tim Coaker of Port Denison Builders. The result is an attractive and sustainable home that has already taken out

multiple awards in the 2012 MBA Geraldton-Mid West building Excellence Awards. (Energy Efficiency, Innovation and Best New Builder)

The journey started when Dr Broad breezed into my studio with her incredible energy and told me she wanted a home that felt like she was "living in a garden". No easy request given that her block was situated in Port Denison which is subjected to some climatic extremes, including strong winds for a large part of the year. A court plan form was an early decision in the design process as it provides protection from the elements, gives all rooms a view to the outdoors, and provides security and privacy.

Another early decision was the use of rammed limestone as a building material as it has a tactile and visual character that appealed to my client, and good sustainability criteria that suited the brief. Being readily sourced in the region, it also has a very low embodied energy and excellent thermal mass for natural cooling and heating. It performs less well as an insulating material, but the overall solar passive design of the home more than compensated for this and still achieves a high 7 Star Energy Rating. The rammed limestone is used as 'blade walls' that create 'secret gardens' and courts and by separating it from other materials the walls stand out as sculptural elements. Richard Jones of Murchison Rammed Earth takes great pride in his work and has created walls full of interest and beautiful to look at and touch.

The home plan form is simple in concept and based around an 'informality' not normally associated with the suburbs. Entry is through a covered breezeway that gives private access to a guest suite that can function independently from the main home. The

THE TEAM





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front door of the home is a carved African timber pivot door with sidelight window of stained glass commissioned for the project and representing a stylised version of a ‘macrocarpa’ plant. The main living space of the home is the “garden room” with large north facing stacking sliding doors opening onto the courtyard and windows facing south onto a covered and protected ‘tropical garden’. This is the essence of the clients’ desire to ‘live as if in a garden’ – planted outdoor spaces visible from the inside with minimal disruption, blurring the distinction between in and out. Excessive heat or glare and minimisation of heat loss/gain is achieved through the use of low-E ‘Comfort Plus’ glass. The west wing of the court is made up of my clients’ bedroom, bathroom, large study and library area. A day-bed is situated off the library facing north onto a secret shaded garden.

The home is floored throughout by polished concrete which is an excellent source of thermal mass while also being low maintenance and an attractive finish. Paints internally are Bauwerk low VOC lime-based paints while in the bathrooms an ancient Moroccan plastering technique called ‘tadelakt’ has been used to avoid any grout and its associated mould problems. Lights throughout the home are low energy LED recessed downlights but their use is minimised during daylight hours because of the abundance of natural light that floods the home. Cooling is through natural cross-ventilation (a strong sea breeze is a welcome visitor on hot summer days) supplemented by efficient fans to all habitable rooms. My client has found the home to be quite comfortable without air conditioning, even given the hot summer we have experienced this year.

Other sustainable features include a solar hot water system, rainwater tanks (Nan enjoys the taste of rainwater over scheme water) and a 2 KW photovoltaic solar system. Given the solar passive design of the home and its energy efficient appliances, the home should be largely self-sufficient for its own energy needs. Water usage will also be minimised through water efficient fixtures and fittings and a predominantly indigenous garden with very low water needs.

But what makes this house truly unique, and what makes it a ‘home’, is the energy and creativity brought to it by the client. It

is full of quirky details and artworks specifically commissioned for the home or physically built by the client herself. An example of this are the shower screens made into a translucent mosaics using chrysopase rock (Australian jade) found by Nan on her travels. These have been cut, polished and assembled into a shimmering mural that transforms a plain glass screen into a work of art.

Other unique artworks commissioned for the home include the stained glass entry feature by artist Joey Martin and the wrought iron gate to the breezeway (also a stylised representation of the ‘macrocarpa’ plant) by Gus Skene. Future plans include a screen to the ‘secret garden’ made of found driftwood and a ‘boma’ fireplace from which one can watch the magnificent stars of the southern sky above. No doubt further additions are being planned as this article is written, and that is what I enjoy most about the home – that it evolves over time and becomes more and more a reflection of my client’s unique and experimental personality, and all the while making a minimal footprint on the environment. This is the essence of what sustainable design should be striving for. **BC**

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