



An aerial view of the nurses' homes at St Apollinaris Hospital

## Exploring alternative territory

**S**hopfitting entity Shospec (Pty) Limited, recently decided to play its part in reducing the sector's carbon footprint through pursuing the ecofriendly alternative of light steel frame (LSF) building system.

Erbacon/Shospec JV are currently constructing 2 485 m<sup>2</sup> of accommodation for nurses and doctors at the St Apollinaris district hospital in Centocow, Creighton, KwaZulu-Natal using the LSF system. The project is due for completion in December 2011, well within its nine-month contract period.

The project emanated from a multi-year plan prepared for the facility by the KwaZulu-Natal Department of Health in 2003, in which the new nurses' homes and doctors' apartments were considered as vital to the future longevity of the 155 bed district hospital.

From an early geological survey undertaken of the property, founding problems were evident which ruled out conventional construction methods. This being the case, light steel frame buildings (LSFBs) were proposed and adopted and now form the basis of this development.

The nurses' homes comprise three 645 m<sup>2</sup> nursing home blocks and a 550 m<sup>2</sup> doctors' apartment cluster. The design is somewhat conventional, drawing influence from the existing hospital buildings dating back to the early 1900s. While LSFB appears to be in its infancy in South



LSF construction in progress on the nurses' accommodation block at the St Apollinaris Hospital in KZN

Africa, architectural detailing was drawn from as far afield as Florida in the USA, Canada, Australia and New Zealand, being interpreted to comply with South African conditions, building regulations and green building aspects.

As with all projects, success is dependent on the entire team ranging from client, implementation agent, consultants and contractors, down to local labour. Having been given special provincial permission to fast track the project, the development bears testimony to what LSFB offers. ■

[www.shospec.co.za](http://www.shospec.co.za) and [www.armstrongconstruction.co.za](http://www.armstrongconstruction.co.za)

### Getting started with LSF – a pilot project



*The completed House Kahler took just five months to complete using the LSF building system*

Shospec's Bjorn Kahler offered the construction of his own home in LSF as the pilot project. 0,8 mm rolled steel lip section panels and trusses were used in the construction. External walls are clad with fibre-cement and orientated strand board (OSB) and internal walls with a 102 mm insulation in the cavity and 15 mm gypsum board.

The quick turnaround time was proven in that the 500 m<sup>2</sup> home, with high-quality finishes, took just five months to complete. Furthermore, the quality and safety of the home is beyond question: the light steel framing system is SABS approved and the structure has met NHBRC standards.

"By building with LSF the home has achieved 30% more energy-efficiency than if it had been built using brick. It retains significantly less heat than brick and concrete, considerably reducing the need for air-conditioning in the summer months."

During the construction phase minimal site waste was generated, resulting in significantly less transport of waste material. Having spent the last four years researching and acquiring skills in light steel framing systems, Kahler is encouraged by the success of the technology in the construction of his home.

Shospec have entered the project into the 2011 Excellence in Construction Awards as well as the SASFA Steel Awards. A richly deserved accolade will certainly crown what has been an incredible journey into the alternative building terrain.