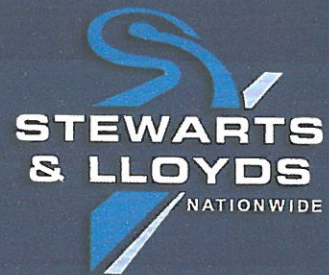


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HOUSE KAHLER

In the previous issue of Steel Construction we featured the upmarket House Raubenheimer situated on a game farm near Bela Bela that used light steel frame building to its full advantage. In this issue we feature another luxury residential project illustrating that LSF is suited for any building application and that more and more home owners are looking at this alternative building method to build their dream house.



The light steel frame structure of the house.

In the previous issue of Steel Construction we featured the upmarket House Raubenheimer situated on a game farm near Bela Bela that used light steel frame building to its full advantage. In this issue we feature another luxury residential project illustrating that LSF is suited for any building application and that more and more home owners are looking at this alternative building method to build their dream house.

House Kahler is built on a game estate on the outskirts of Pietermaritzburg, KwaZulu-Natal. It is a 510m² light steel frame building that has four bedrooms, a study, three bathrooms, lounge, kitchen, a dining room, T.V. lounge, servants' quarters and a triple garage. *(In other words not your average 'central locking' complex unit. Ed)*

The structure of the house is a light weight steel frame system (wall panels, roof trusses and roof panels) with colour bond corrugated iron roof sheeting. The wall cladding comprises fibre cement flat sheet, OSB board, 102mm cavity batt insulation and 15mm Gypsum board.



An evening view of showing the internal space of the house opening onto the veranda.

project team

Developer/Owner:

Bjorn Kahler

Architect:

Virtual Architects

Structural Engineer:

Design Desk

Project Manager:

Shospec (Pty) Ltd

Main Contractor:

Shospec (Pty) Ltd

Steelwork Contractor:

Shospec (Pty) Ltd

Detailers/Detailing Company:

Steeltek Systems (Pty) Ltd – LSF Roller

CONSTRUCTION TIME LINE

The concrete raft foundation of 510m² was laid in mid May 2010 and completed by the end of May 2010. Steel erection commenced on 3 June 2010 and the house was occupied by 22 October 2010.

- The entire super structure was complete and ready for occupation in 21 weeks.
- The LSF structure, external cladding, windows and roofing took nine weeks to complete.
- The high quality features and finishes internally, including the installation of nine folding stacking glass doors, were completed in the remaining 12 weeks.

ENVIRONMENTAL SUSTAINABILITY AND ENERGY EFFICIENCY

The home was designed with numerous features to conserve energy and water as well as considering possible expansion.

During construction there was minimal material waste and transport requirements were considerably less than in a conventional building. The home has solar water heating, a 500L grey-water system that irrigates the garden automatically twice a day and a 15 000L rainwater storage tank with distribution options to either service the garden, laundry or the whole house if need be. Ten sky lights, seven top lights above the veranda roof and solar efficient glass on the east and the west sides of the home maximise natural lighting and ventilation. LP gas was installed for heating and cooking.

The roof sheeting was fitted with 50mm insulation under the sheeting as well as 100mm Aerolite insulation above the ceiling to achieve maximum thermal insulation. All doors have sealed thresh holds to minimise drafts.

THE VERDICT

The owner, Bjorn Kahler is once again convinced that LSF is the way to go: "The quality of finish achievable with LSF is excellent. We have had no regrets in choosing an alternative building method compared to conventional methods. Furthermore we experienced no problems with our bond application, NHBRC or local authorities in accepting a LSF building method."

For more info visit www.shospec.co.za or contact
Tel: 033 386 0100/033 386 0103 Fax: 033 386 0104.



The client was enthralled with the excellent quality finish of the house.

LSF was chosen due to its energy efficiency, speed of construction and quality finish. The choice of using this building method was based on the Shospec's (main contractor, project manager and steelwork contractor of the project) experience in using alternative building methods, their sound research and development in LSF, as well as having existing projects that proved LSF an excellent building method.

DESIGN

The house was designed to comply with the architectural guidelines of the estate which is based around a 'country/farm lifestyle' with large verandas and a light vernacular.

The interior is modern and minimalistic with clean lines and large open plan areas. The home opens up into one free flowing area by opening nine 2.4m-high stacking glass doors which all lead onto the veranda.

Using LSF also enabled the contractor to accomplish the slick, slim lines and excellent quality finish of the house, which are not easily achieved with conventional building methods.



The LSF structure, external cladding, windows and roofing took nine weeks to complete.