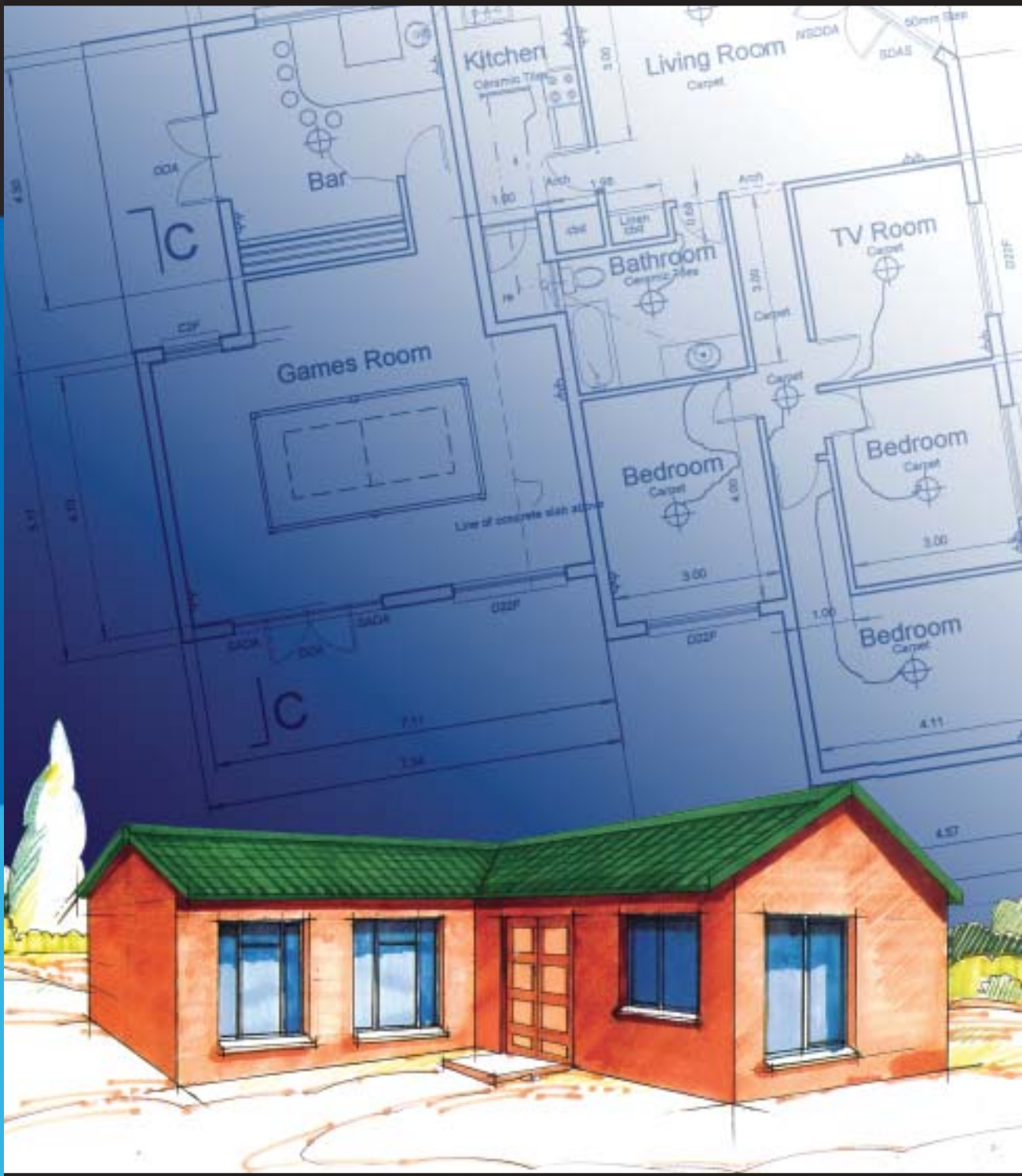


CONCRETE ROOF TILES

*Independent cost comparison of a
complete roof for a 134m² house*



**Concrete Roof Tiles
make the difference!**

INTRODUCTION

Concrete roof tiles are the most cost-effective roof covering. By using concrete roof tiles investors and specifiers alike can be assured of a long-lasting roof covering with an aesthetically pleasing appearance.

An independent survey was carried out to verify the cost-effectiveness of concrete roof tiles. These cost comparisons are the result of input from many sources and were co-ordinated by Mr Victor Booth Pr Eng. -a consulting engineer specialising in roofs. The Concrete Manufacturers Association gratefully acknowledges the efforts of all participants in helping to formulate the data and the results.

A medium sized house of 134m² was used to illustrate the comparisons shown in the graph. The prices shown in the graphs are for a complete erected roof structure covered with the appropriate material. Fascia boards and gutters have been excluded. No provision has been made for either an underlay membrane or ceiling construction. Truss prices at the coast would be more expensive due to the timber treatment requirement in such areas.

The 26° roof pitch for concrete tiles does not require an underlay although it is recommended as a dust excluder and would cost approx R9/m² installed. A proprietary membrane for steel sheeting (or other materials) as an insulating layer would cost approx R20/m² installed

ASSUMPTIONS

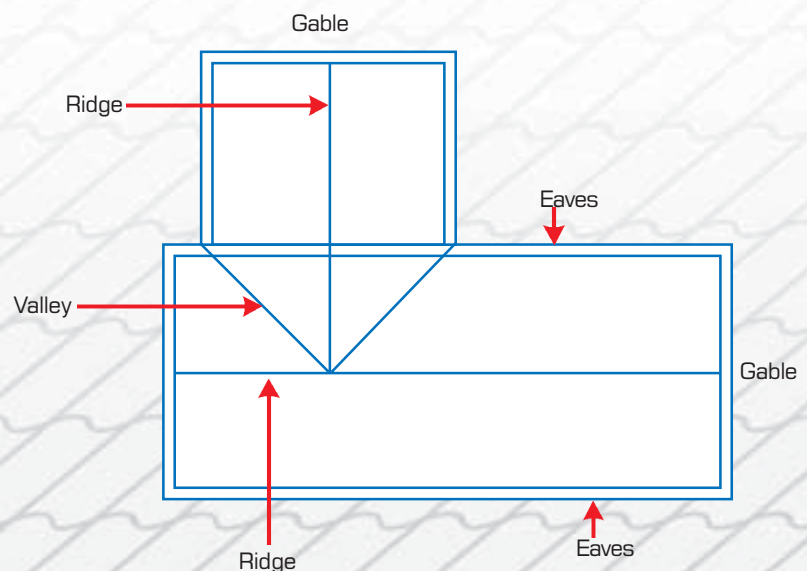
Certain assumptions have been made to simplify the costing model. Whilst some housing developments comprise many units and developers/contractors can negotiate special "project discounts", the majority of builders are building "one off" houses and will obtain their roofing materials from their local suppliers at less advantageous prices. The latter forms the basis of the analysis and whilst this assumption may be criticised by some, the author believed it to be a valid assumption. The roof pitches are all 26° as it was felt that the roof would, in most circumstances, want to be made an architectural design feature of the building.

METHODOLOGY

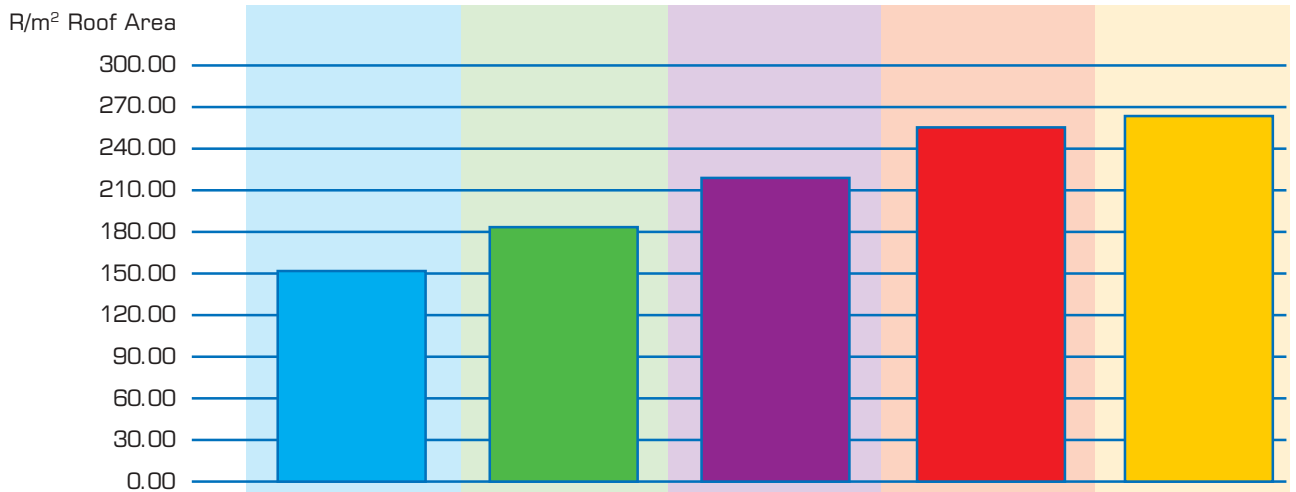
The design parameters for this roof structure are fixed, viz. pitch, span, overhangs etc. , as well as the costing data for the various components. Erected truss prices for this roof structure varied by only approx 15%. If the truss prices are not 100% accurate, the relationship between the various truss prices, based on material and labour content, will always be the same. That is, if all the truss prices were multiplied by 1.3 (i.e. add 30%) due to material and labour price increases the general relationships between the different costs, as depicted graphically, would not change. The figures relate to a "snapshot" in time. Inflationary price increases of materials and labour vary from product to product, as does the timing of the increases.

Disclaimer:-

Whilst every effort has been made to ensure accuracy of the results they are intended to be used as a guide only and not as a methodology for costing roofs. We can take no responsibility for misuse or misunderstanding of the data.



COST COMPARISON



ROOF COVERING	THROUGH COLOUR CONCRETE ROOF TILES	PRE-PAINTED IBR METAL SHEETING	PRESSED METAL TILES	FIBRE CEMENT SLATE	ALUMAZ NATURAL SLATE
SPECIFICATION					
FLOOR AREA (m ²)	134	134	134	134	134
ROOF AREA (on slope m ²)	165	165	165	165	165
RIDGE CAPPING	Tapered Ridge	Ridge Cap	Angle Ridge	N/A	N/A
PITCH	26°	26°	26°	26°	26°
TRUSS SPACING	760mm c/c max	1 200mm c/c max	1 100mm c/c max	900mm c/c max	760mm c/c max
BATTEN SPACING	345mm c/c max		369mm c/c max	250mm c/c max	190mm c/c max
PURLIN SPACING		1 150mm c/c max			
GABLE OVERHANG	300mm	300mm	300mm	300mm	300mm
TRUSS SPAN	6 300mm	6 300mm	6 300mm	6 300mm	6 300mm
EAVES OVERHANG	600mm	600mm	600mm	600mm	600mm
COSTS					
TRUSSES and SUNDRIES	12 723.00	10 412.00	9 940.00	12 286.00	13 033.00
ROOF ERECTION	3 454.00	3 619.00	3 454.00	3 454.00	3 948.00
ROOFING MATERIAL INCLUDING FIXING	8 990.00	16 655.00	22 667.00	26 433.00	26 630.00
TOTAL COST OF ROOF	25 167.00	30 686.00	36 061.00	42 173.00	43 611.00
COST R/m² FLOOR AREA (excl VAT)	188.00	229.00	269.00	315.00	325.00
COST R/m² ROOF AREA (excl VAT)	153.00	187.00	219.00	256.00	265.00

Notes

- Roof truss prices are based on a standard industry pricing practice.
- All prices used in the cost comparison are based on 2003 (April) figures.
- Labour costs for the erecting of the timber structure and the fixing of the roof covering material are included in the cost comparison.
- General sundries exclude fascia boards and barge boards.
- The cost of gable masonry has been excluded as it is a "constant" for all roofs.
- Above rates exclude VAT.
- Waste is included in all calculations



CONCRETE ROOF TILE MEMBERS

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Concor Technicrete (Pty) Ltd	Polokwane	Northern Province	(015) 293 8083	(015) 293 8743
	White River	Mpumalanga	(013) 758 1203	(013) 758 1054
Inca Masonry Products (Pty) Ltd	East London	Eastern Cape	(043) 745 1215	(043) 745 1501
Lafarge Roofing South Africa (Pty) Ltd	Vereeniging	Gauteng	(016) 430 8000	(016) 422 0180
	Benoni	Gauteng	(011) 914 3043	(011) 914 4580
	Bloemfontein	Free State	(051) 432 4681	(051) 432 5089
	Brits	Northern Province	(012) 250 2964	(012) 250 2218
	Cape Town	Western Cape	(021) 534 1441	(021) 534 7851
	Durban	KwaZulu-Natal	(031) 565 2911	(031) 565 1312
	East London	Eastern Cape	(043) 743 2189	(043) 743 2191
	George	Western Cape	(044) 874 5663	(044) 874 5714
	PortElizabeth	Eastern Cape	(041) 463 1155	(041) 463 2629
Marley Roofing (Pty) Ltd	Olifantsfontein	Gauteng	(011) 316 2121	(011) 316 4138
	Ekandustria	Mpumalanga	(013) 933 3351	(013) 933 3436
	Tongaat	KwaZulu-Natal	(032) 944 4155	(032) 944 7796
Zimtile (Pvt) Limited	Harare	Zimbabwe	(09263) 4 663511	(09263) 4 663516