





## 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 commercial building of 1158m<sup>2</sup> 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 undertile membrane it is recommended as a dust excluder and would cost approx R9/m<sup>2</sup> installed.

## ASSUMPTIONS

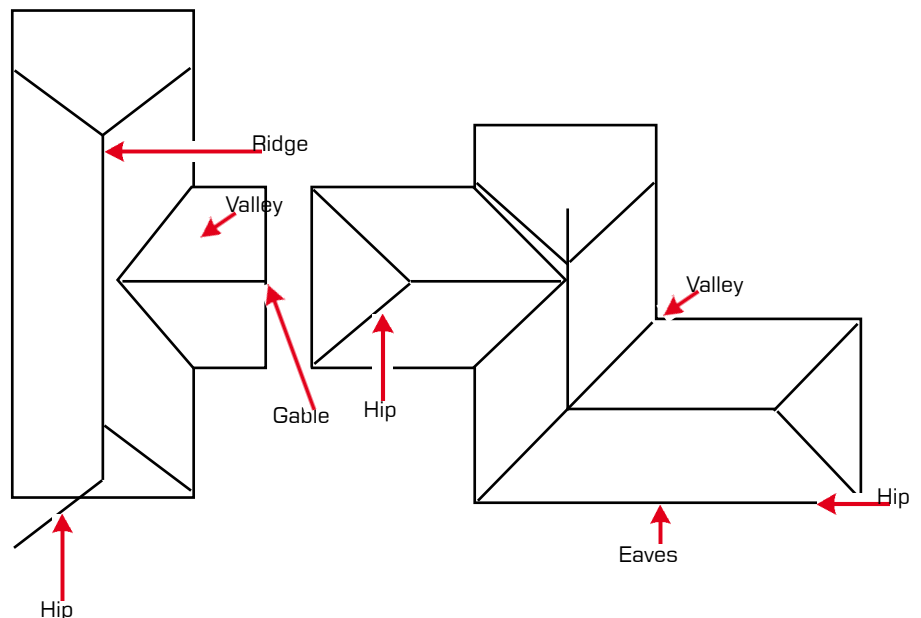
Certain assumptions have been made to simplify the costing model. The area of 1158m<sup>2</sup> was chosen arbitrarily and has no special significance other than being fairly representative of current architectural design practice. The roof pitches are all 26° as it was felt that the roof would, in most circumstances, want to be made an architectural design feature of the building.

## METHODOLOGY

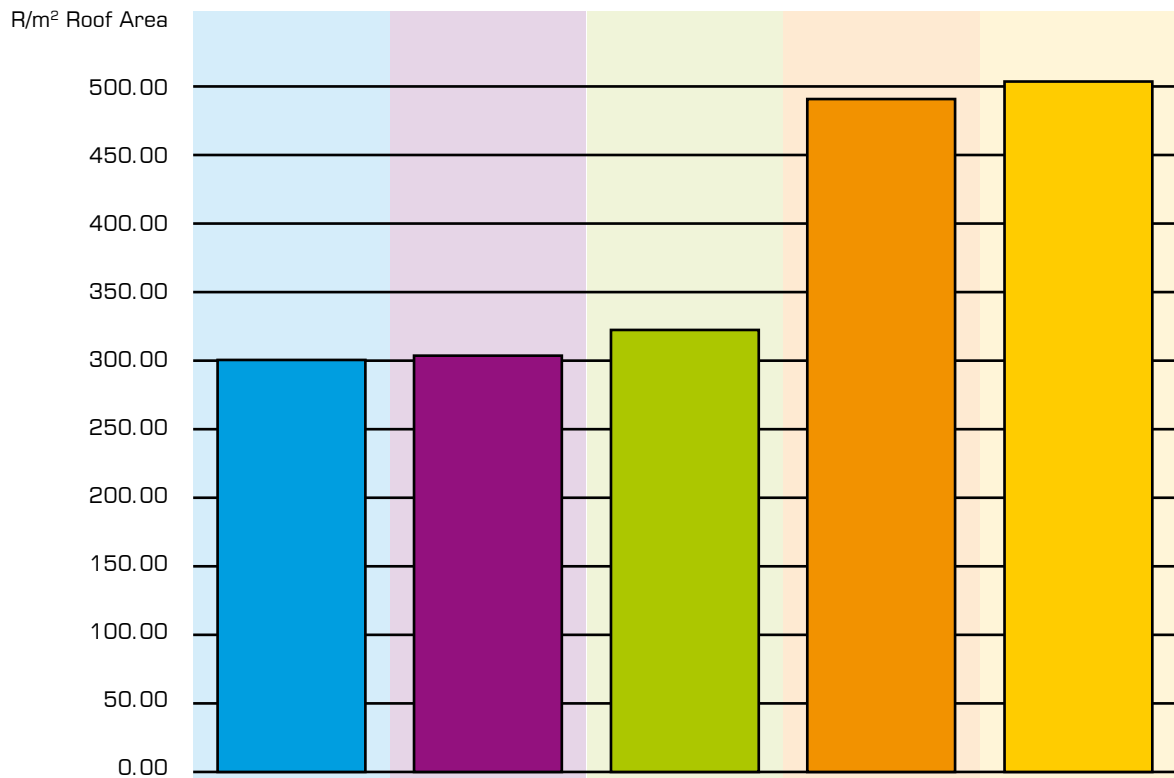
The design parameters for this roof structure are fixed, viz. pitch, span, overhangs etc., as well as the costing data for the various components. If the truss prices are not 100% accurate, the relationship between the various truss prices, based on material and labour content, will always be the same. 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	NATURAL SLATE	FIBRE CEMENT SLATE
<b>SPECIFICATION</b>					
FLOOR AREA (m <sup>2</sup> )	1 158	1 158	1 158	1 158	1 158
FLOOR AREA (on slope m <sup>2</sup> )	1 451	1 451	1 451	1 451	1 451
RIDGE CAPPING	Tapered Ridge	Pre-painted Steel 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	760mm c/c max	900mm c/c max
BATTEN SPACING	345mm c/c max		369mm c/c max	190mm c/c max	250mm c/c max
PURLIN SPACING		1 150mm c/c max			
TRUSS SPAN	11 800mm	11 800mm	11 800mm	11 800mm	11 800mm
EAVES OVERHANG	600mm	600mm	600mm	600mm	600mm
<b>COSTS</b>					
TRUSSES and SUNDRIES	213 790.00	187 405.00	163 099.00	236 866.00	212 694.00
ROOF ERECTION	50 785.00	43 530.00	50 785.00	58 025.00	50 785.00
ROOFING MATERIAL INCLUDING FIXING	170 216.00	211 574.00	264 168.00	419 688.00	464 114.00
<b>TOTAL COST OF ROOF</b>	<b>434 791.00</b>	<b>442 509.00</b>	<b>478 052.00</b>	<b>714 579.00</b>	<b>727 593.00</b>
<b>COST R/m<sup>2</sup> FLOOR AREA (excl VAT)</b>	<b>375.00</b>	<b>382.00</b>	<b>413.00</b>	<b>617.00</b>	<b>628.00</b>
<b>COST R/m<sup>2</sup> ROOF AREA (excl VAT)</b>	<b>300.00</b>	<b>305.00</b>	<b>329.00</b>	<b>492.00</b>	<b>501.00</b>

## Notes

- Roof truss prices are based on a standard industry pricing practice.
- All prices used in the cost comparison are based on 2009 (August) 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



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