

INDEPENDENT COST COMPARISON
CONCRETE ROOF TILES vs. STEEL SHEETING
FROM 6 M TO 20 M SPAN



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 roof covering with an aesthetically pleasing appearance.

An independent* survey was carried out to the cost effectiveness of concrete roof tiles. The purpose of these span/material/cost graphs is to give architects, building designers and prospective home builders an indication of the cost relationship between concrete roof tiles and steel sheeting.

The number of variables has been kept to a "practical minimum" to make this costing model a practical and user friendly tool.

The costings shown are not to be construed as exact definitive figures but are the results of an investigation which shows the "relative" costs of various types of new roof construction on various span and pitches. Whilst the costing was valid at the time of publication the relationship between the various items making up the totals should not vary unless there is an inordinately large increase in the cost of one of the major components which does not have a similar percentage increase in the other major components.

Assumptions

The following overall assumptions are made in the model.

- Gable to gable construction of a rectangular building with no hips or valleys.
- Normal trading conditions - no discounts, specials etc.
- Gauteng pricing - however, the graphics can still be used in other areas as the relative costs should only differ marginally e.g. Timber trusses may be more expensive at the coast due to preservative treatment but this could be offset by reduced transport costs of the sawn timber.
- Construction of gable walls (or other cladding) is excluded.
- An eaves overhang of 600 mm and a verge overhang of 300 mm is included.
- Ceiling construction is excluded.
- The weight of "services" has been allowed for on those spans which could be practicable for commercial or industrial buildings.

Timber trusses and concrete tiles

- Spacing of trusses 760 mm
- Larger span trusses become 2 ply and / or "piggyback" construction.
- Concrete tiles Double Roman through colour.
- Ridge tiles are included.
- Plastic underlay is included in the structure cost.

Timber trusses and steel sheeting

- Spacing of trusses 1200 mm
- Larger span trusses become 2 ply and / or "piggyback" construction.
- IBR profile, 0,6 mm galvanised steel sheeting
- Colour (one side) sheeting is shown separately.
- Ridge capping and verge flashing is included.
- Insulation (e.g. Sisalation / Alucushion) is shown separately.

Steel trusses and steel sheeting

- Spacing of trusses 6 metres
- Roof pitch 5°
- IBR profile, 0,6 mm galvanised steel sheeting.
- Colour (one side) sheeting is shown separately.
- Ridge capping and verge flashing is included.
- Insulation (e.g. Sisalation / Alucushion) is shown separately.
- Bull nose eaves are not included (± R17/m²)
- Final paint coat on exposed steel trusses is not included (± R10/m²)

How to read the graphs



The cost of the material for the eaves and verge overhangs have been included, but the final Rands/m² cost is based on the external wall dimensions i.e. L x S (floor plan area).

The graphs are plotted as bars and labelled 'A', 'B' or 'C' for spans (S) from 6m to 20m in 2 metre increments.

Bar 'A' represents timber trusses and concrete tiles.

Bar 'B' represents timber trusses and steel sheeting.

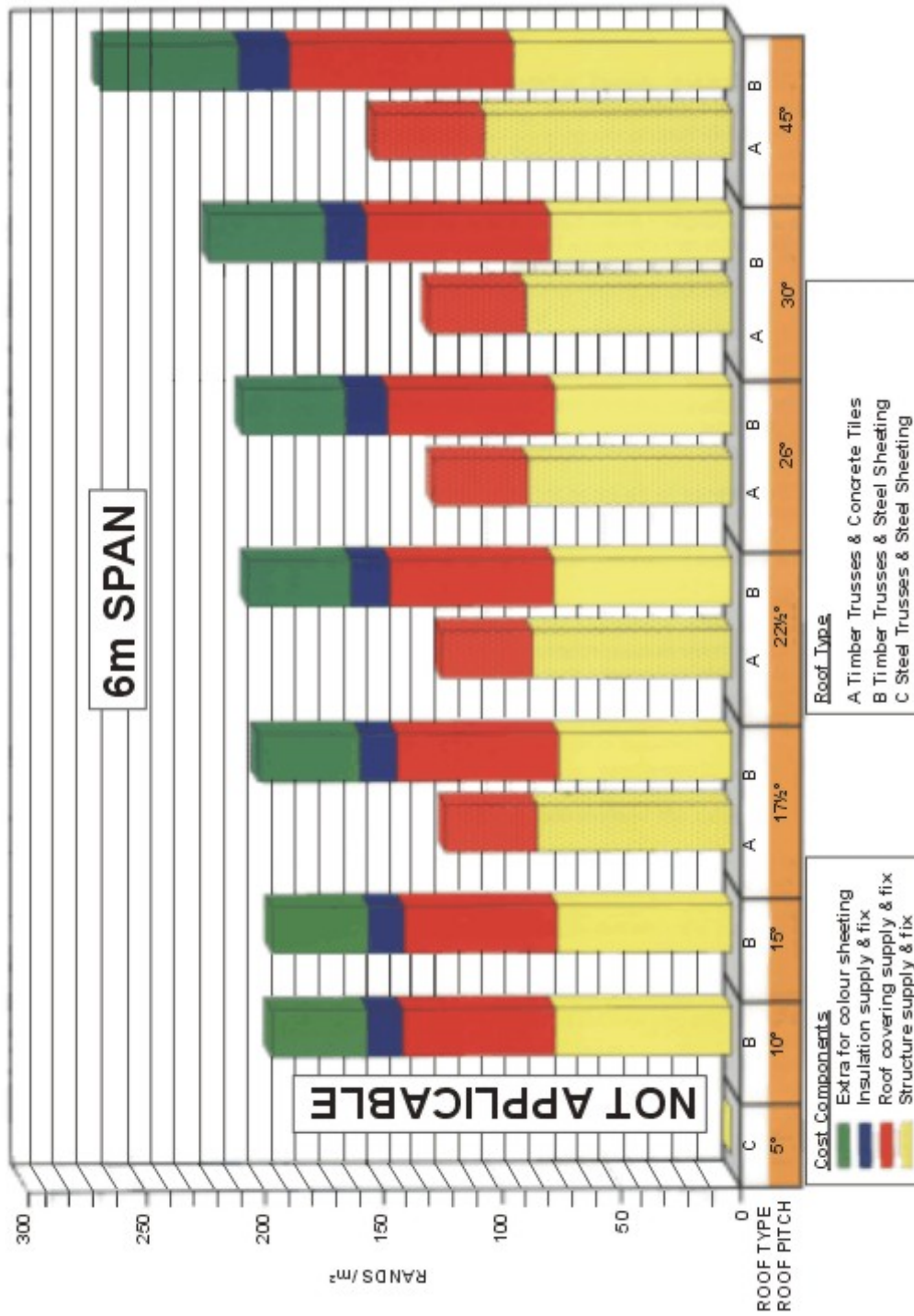
Bar 'C' represents steel trusses and steel sheeting.

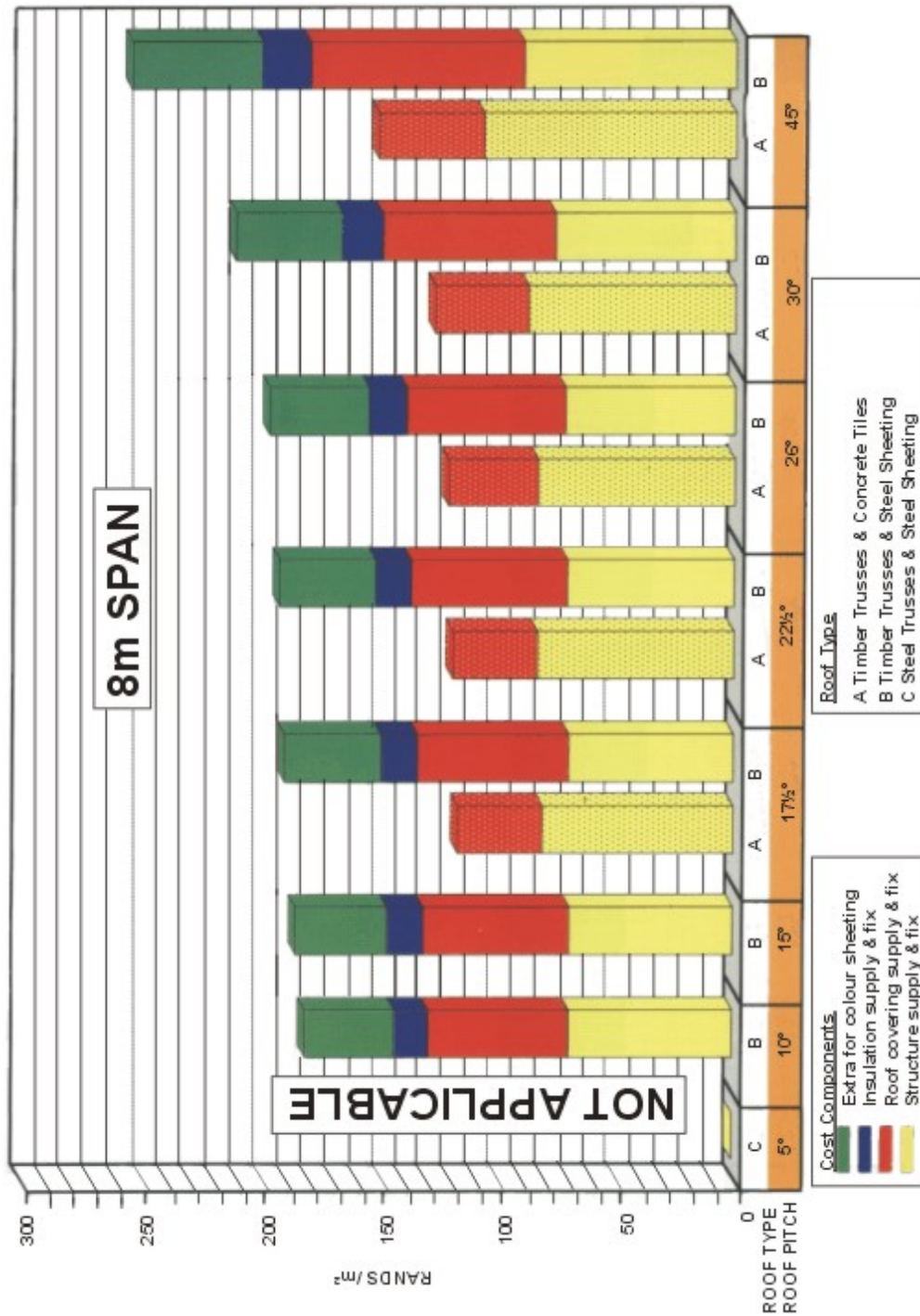
Impractical span / pitch combinations have not been included and area shown as "not applicable".

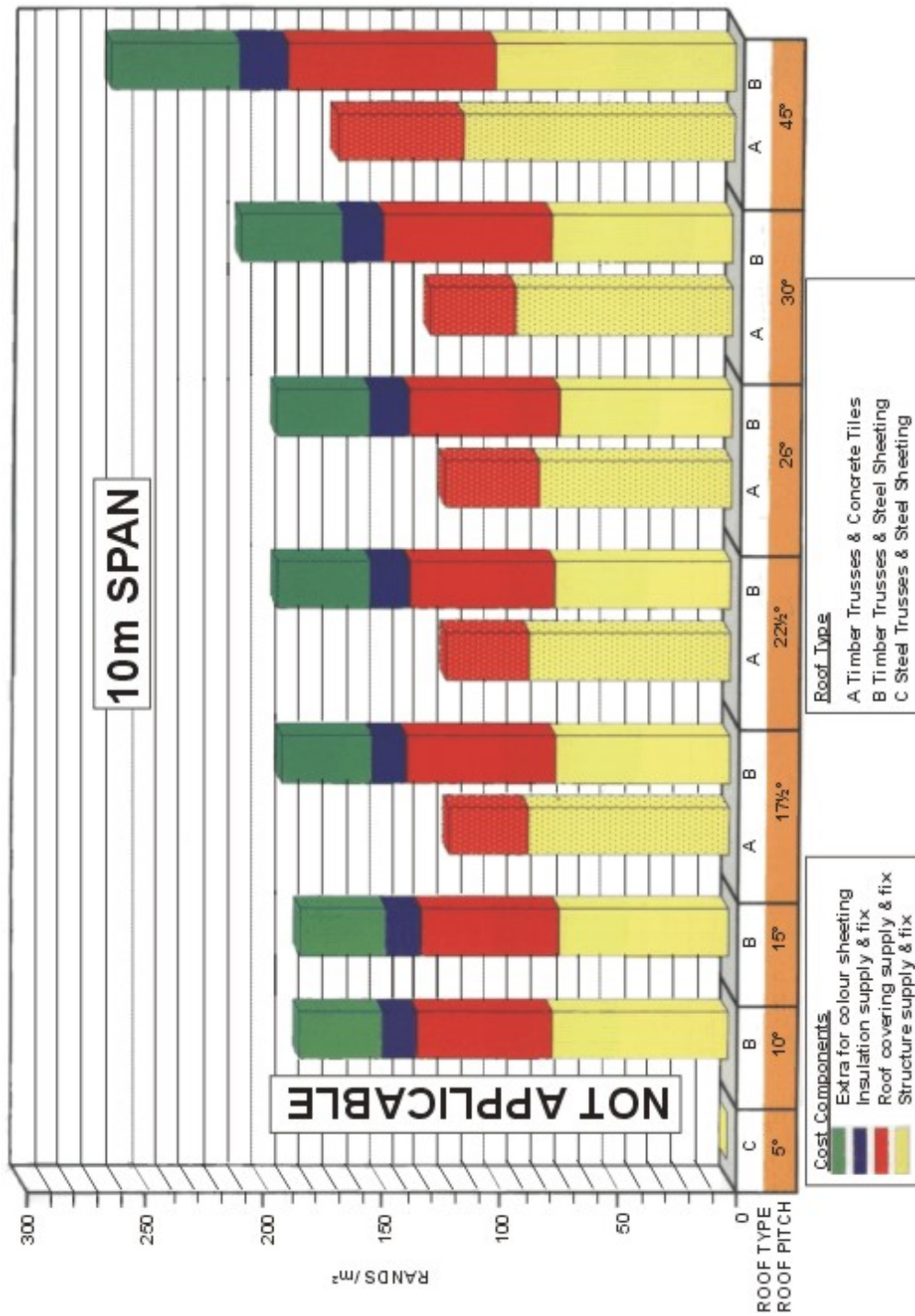
Example: For a 12 metre span

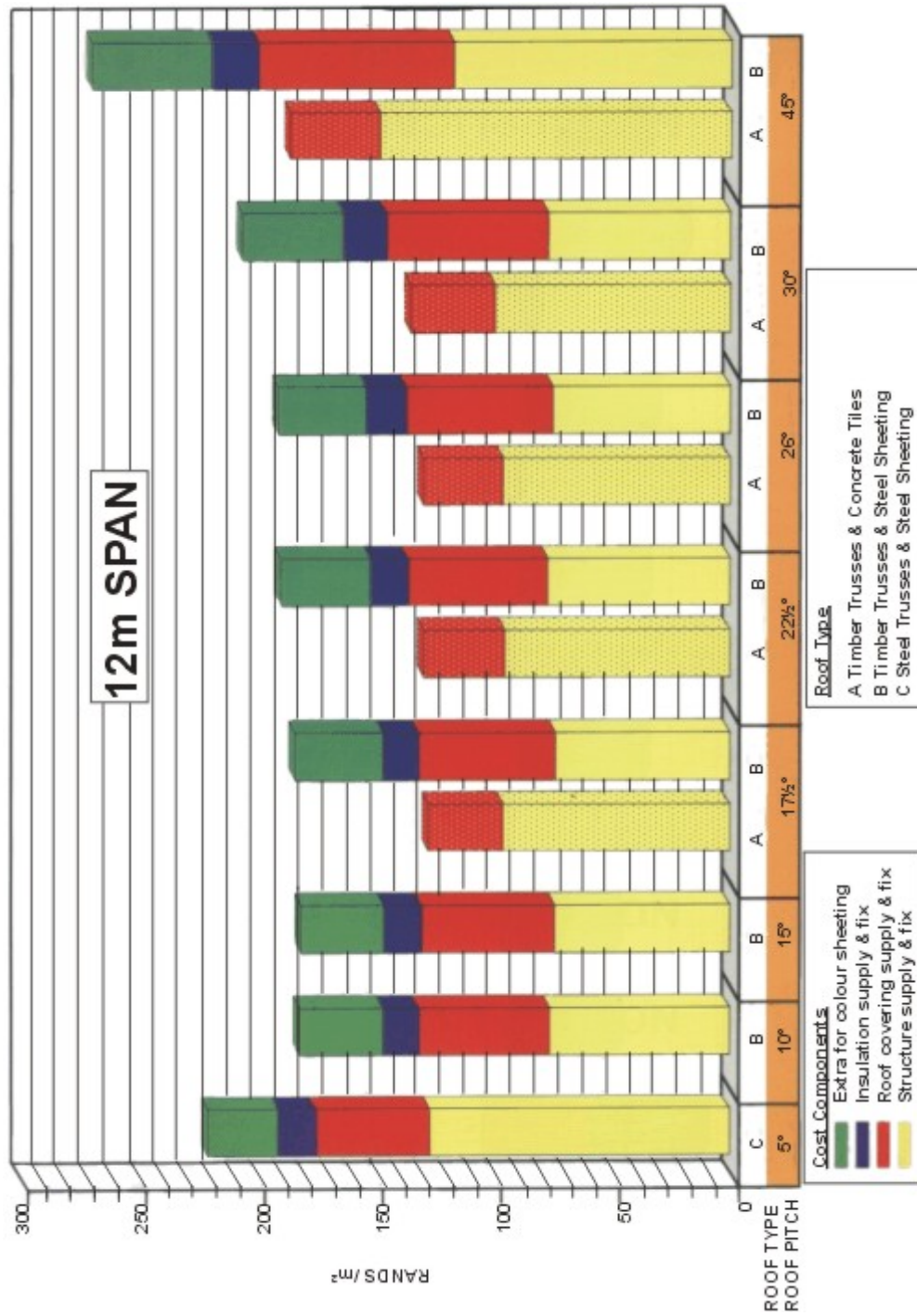
- 17 ½ ° timber with concrete tiles will cost R126/m².
- 10 ° timber trusses with galvanised sheeting but without insulation and coloured sheeting i.e. 'B' Yellow + Red only will cost R131/m².
- 10 ° timber trusses with coloured sheeting and including insulation i.e. 'B' Yellow + Red + Blue + Green will cost R181/m².
- 5 ° steel trusses with galvanised sheeting but without insulation and coloured sheeting i.e. 'C' Yellow + Red only will cost R175/m².
- 5 ° timber trusses with coloured sheeting and including insulation i.e. 'C' Yellow + Red + Blue + Green will cost R220/m².

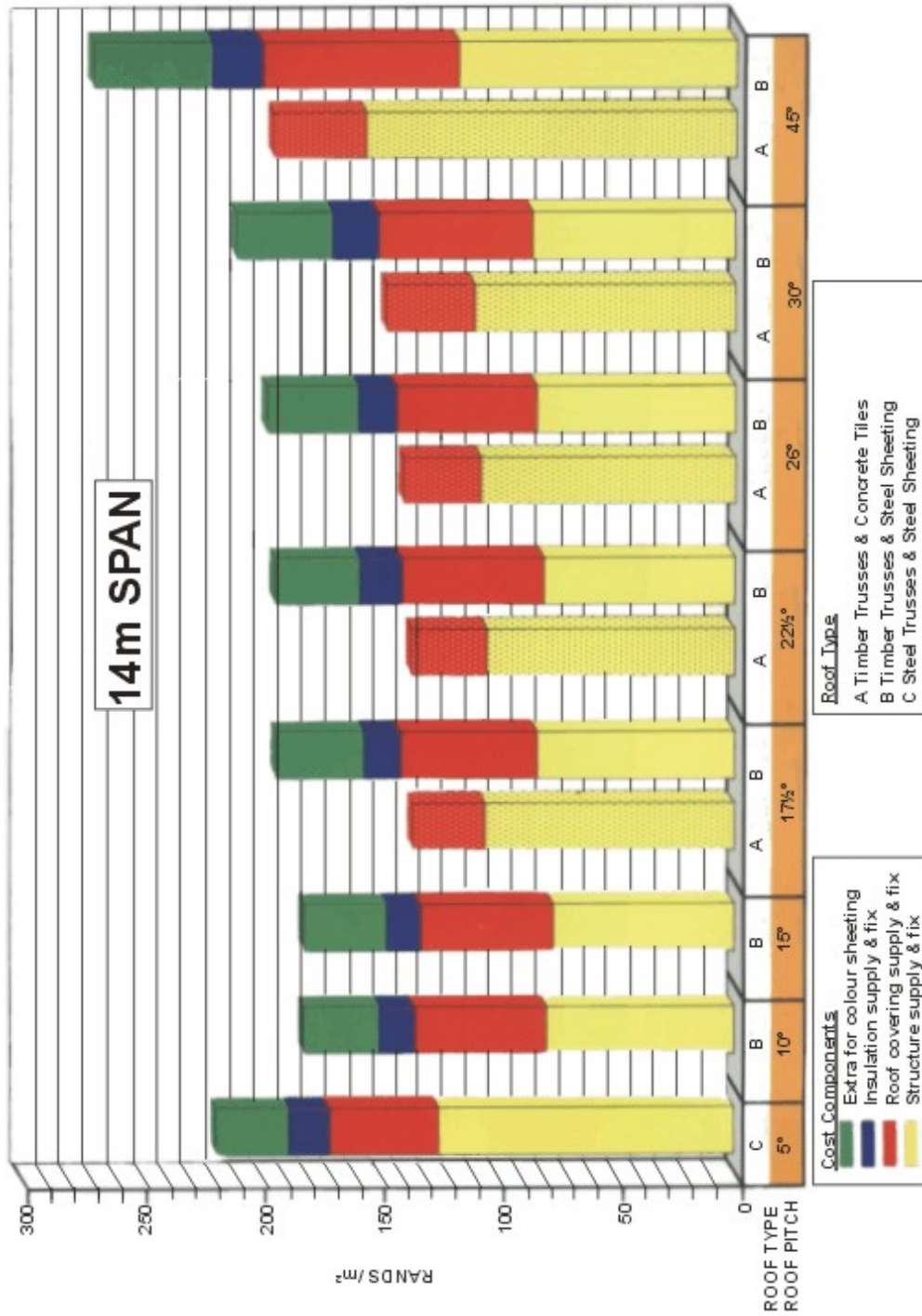
* The analysis from which these results were obtained was conducted independently by V.R. Booth Pr. Eng. Mr. Booth is nationally recognised as one of the foremost independent experts on roof construction.

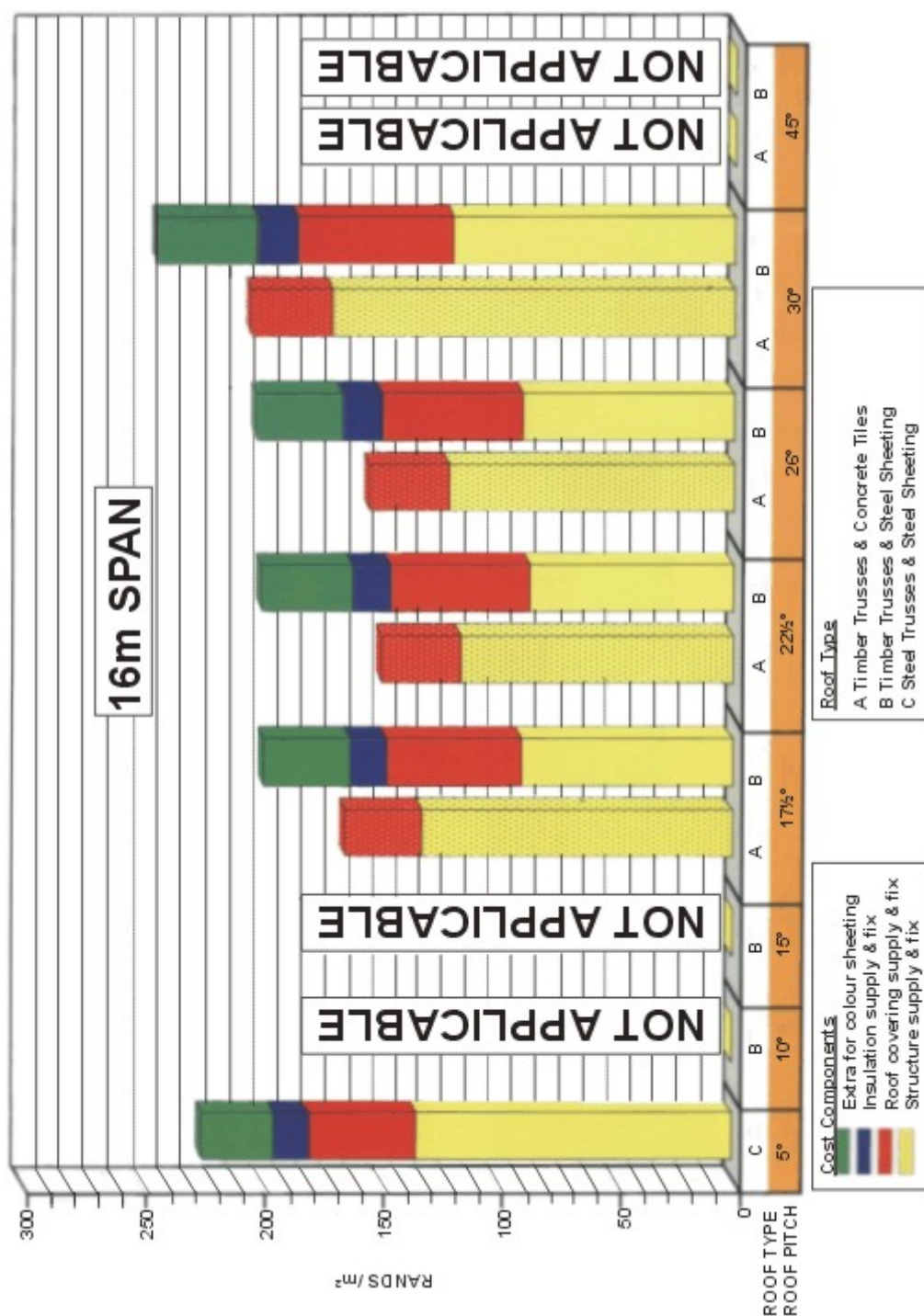




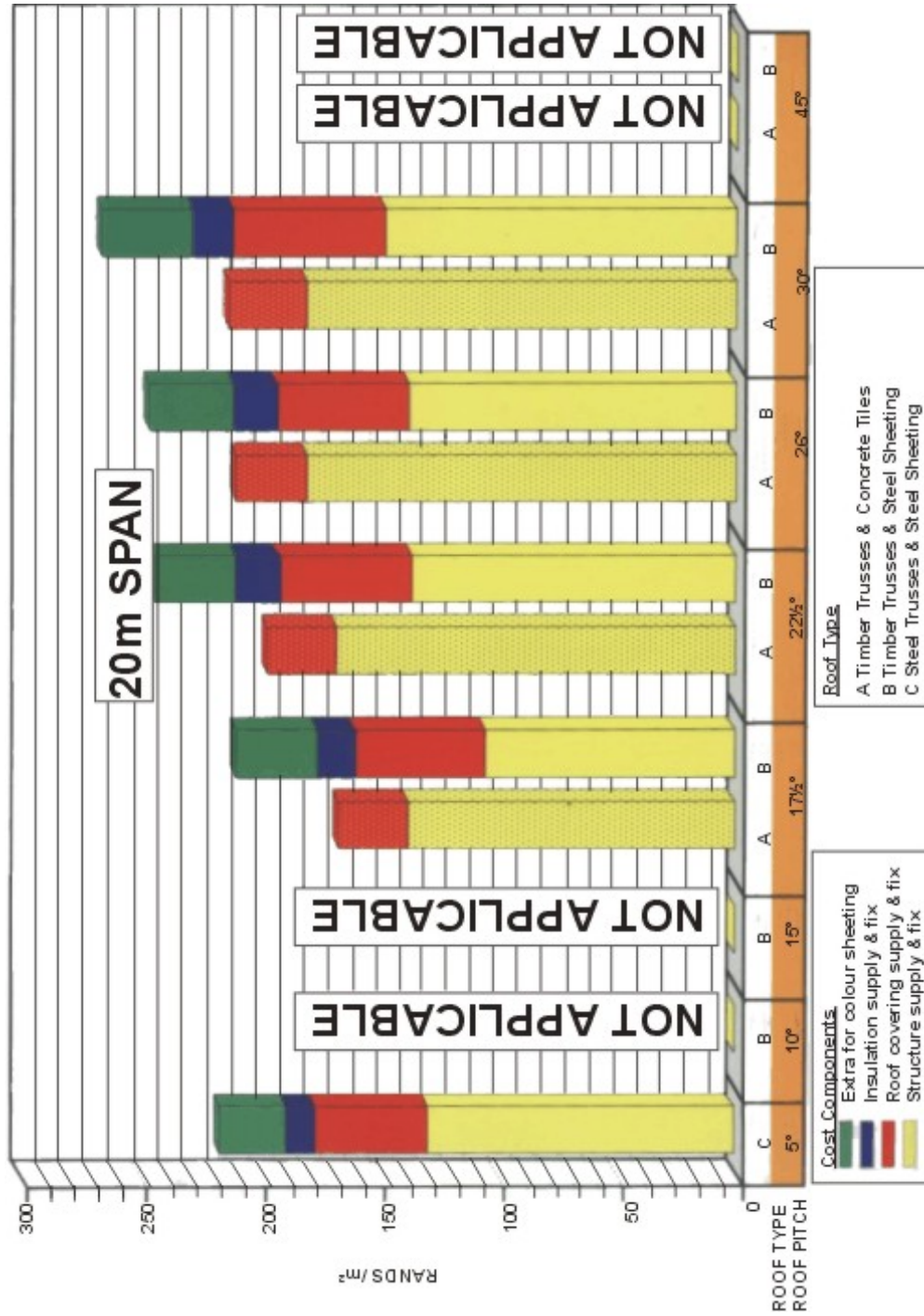












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