



Information Bulletin

June 2010

LIGHTWEIGHT VS HEAVYWEIGHT ROOFING TRUSS SUPPLY COST COMPARISON

EXECUTIVE SUMMARY

The NZ Metal Roofing Manufacturers Inc. published a bulletin in October 2009 titled, "Lightweight vs Heavyweight Roofing Structural Cost Comparison". (download at www.metalroofing.org.nz)

That bulletin used a sample of 3 plans and stated average truss supply savings of \$3.00/m² of roof area when using a lightweight roof compared with a heavyweight roof.

To strengthen the sample size this information was based on, the NZMRM engaged PlaceMakers, who undertook an analysis of 26 plans from the Auckland market that included a mix of simple and complex roofs, single and double storey roofs.

The PlaceMakers analysis confirmed the original findings that on average there are truss savings of around \$3.00 / m² roof area when using a lightweight roof compared with a heavyweight roof.

RESULTS

Truss supply savings using a lightweight roof compared with a heavyweight roof:

| | Truss supply savings | |
|-----------------------------|-----------------------------|---|
| Lowest savings | \$276 | \$0.92 / m ² roof area |
| Highest savings | \$1443 | \$4.81 / m ² roof area |
| Average savings | \$939 | \$3.13 / m² roof area |
| Single level – simple roof | | 12% |
| Single level – complex roof | | 12% |
| Two storey | | 16% |

Source: PlaceMakers Auckland Frame & Truss

Note: 300m² average roof

NOTE: The above only shows Truss supply savings. Total average savings of around \$9.00 / m² roof area can be achieved using a lightweight roof in truss, roof bracing, lintels and framing. Refer the Information Bulletin titled "Lightweight vs Heavyweight Roofing Structural Cost Comparison – October 2009" at www.metalroofing.org.nz

METHOD

26 plans from the Auckland market were selected, including a range of designs and earthquake / wind zones, to provide a good representation of the general mix of roof and truss designs.

Truss designs were produced and then priced for both a heavy weight and a lightweight roof, and then compared.

Truss supply prices are ex factory and include timber, plates, fixings, tie downs and manufacture.

DISCUSSION

The PlaceMakers analysis confirms the original NZMRM report and shows that significant truss supply savings are achievable using lightweight roofing materials compared to using heavyweight roofing materials.

There is a range of savings achieved depending on house design and location. Savings were slightly higher for double storey homes compared with single storey homes, however in all cases savings were achieved and in almost all cases the savings were significant.

It is recommended that when comparing roof systems and prices to take into consideration the structural savings that can be achieved using a lightweight roof over a heavyweight roof.

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