

**Internal report: dressed timber or LVLs for  
V/Job No. 307/2018**

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## 1. Executive summary

The report considers the key elements of cost and availability or appearance in the use of LVL's or dressed solid timber for the use of clear span roof. Depending upon the importance for the client the outcome may vary

## 2. Introduction

This report has been prepared to provide more information on which to base the decision as to whether to use dressed solid timber or LVLs for the clear span roof of Job No. 307. The pitched roof will be visible from the inside because there will be no ceiling.

## 3. Method

To obtain the information a web search was carried out on 9-10<sup>th</sup> October 2018 to investigate and compare the properties of both timber and LVLs for exposed rafters, and for a clear internal span of 12 meters

## 4. Results or Findings

For ease of comparison the results of the web search are presented as a table below. Where there are no references after the comments this is because the information is either based on experience about the materials or is common knowledge.

Aspect	Dressed timber	References	LVL	References
Size	290x70 at 0.9m 240x70 at 0.6m	<a href="https://www.branz.co.nz/cms_show_download.php?id=e4d4f6c2df8e24d228728c398c3a43b006dbf51b">https://www.branz.co.nz/cms_show_download.php?id=e4d4f6c2df8e24d228728c398c3a43b006dbf51b</a> (Table 15)	200x45 at 0.9m	<a href="https://fbvl.com.au/assets/Uploads/4236168fac/Futurebuild-hySPAN-Span-Guide-October-2012.pdf">https://fbvl.com.au/assets/Uploads/4236168fac/Futurebuild-hySPAN-Span-Guide-October-2012.pdf</a> (table 9)
Cost	NZ\$44.17/m (wet only)  AU\$76.10/m*	<a href="http://www.cypress-sawmill.co.nz">www.cypress-sawmill.co.nz</a> (personal communication)  <a href="https://www.subirest.com.au/media/price-lists/subirest-price-list-structural-timber-SR-20180208.pdf">https://www.subirest.com.au/media/price-lists/subirest-price-list-structural-timber-SR-20180208.pdf</a>	NZ\$15/m  AU\$13.49/m	<a href="http://timberandbuildingsupplies.com.au/product/240-x-45-h2-lvl-variable-lengths-15-00m/">http://timberandbuildingsupplies.com.au/product/240-x-45-h2-lvl-variable-lengths-15-00m/</a> <a href="https://www.subirest.com.au/media/price-lists/subirest-price-list-structural-timber-SR-20180208.pdf">https://www.subirest.com.au/media/price-lists/subirest-price-list-structural-timber-SR-20180208.pdf</a>
Appearance and finish	Natural wood		Looks more like ply than wood	
Product availability	Need to order		48 hrs before dispatch	<a href="http://timberandbuildingsupplies.com.au/product/240-x-45-h2-lvl-variable-lengths-15-00m/">http://timberandbuildingsupplies.com.au/product/240-x-45-h2-lvl-variable-lengths-15-00m/</a>
Speed of assembly	Heavy to handle in 6m lengths		Lighter and easier to handle	<a href="https://www.probuilder.com/wood-vs-engineered-lumber">https://www.probuilder.com/wood-vs-engineered-lumber</a>

\*It was not possible to find a New Zealand price in the web search so two Australian values have been included for comparison. The AU\$ price is for the nearest available of 280x65 solid pine. The right size of 290x70 is available from a Nelson supplier (<http://southpine.co.nz/products/>). The NZ price shown is for dressed wet macrocarpa (300x75) via a personal communication but this may not be suitable.

## 5 Conclusion and recommendations

This decision is based on what is more important—cost and availability or appearance. If cost is more important the LVLs are both easier to handle on site, being smaller, and more than three times cheaper than solid macrocarpa. LVLs have the additional advantage of dimensional stability. However, if having real timber is important for the finished appearance of the building then it is possible to source the material from New Zealand but at a cost.