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To whom it may concern

**Subject: Durability of heartwood Spruce compared to durability of sap/heartwood Douglas fir**

All species are classified on the basis of heartwood durability because sapwood regardless of tree species is non-durable.

The heartwood of European grown Sitka spruce (*Picea sitchensis*), Norway spruce (*Picea abies*), and heartwood of Douglas-fir (*Pseudotsuga menziesii*) is Australasian durability Class 4 (AS 5605-2005). According to NZS 3602:2003 (Ref No 1E1) all roof trusses (excluding skillion roof) of Douglas fir is approved without preservative treatment with expected service life of 50 years. I see no reason why European grown heartwood of spruce would not be suitable for this end use.

Yours sincerely

A handwritten signature in black ink that reads "Tripti Singh". The signature is written in a cursive style with a long horizontal line extending from the end.

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