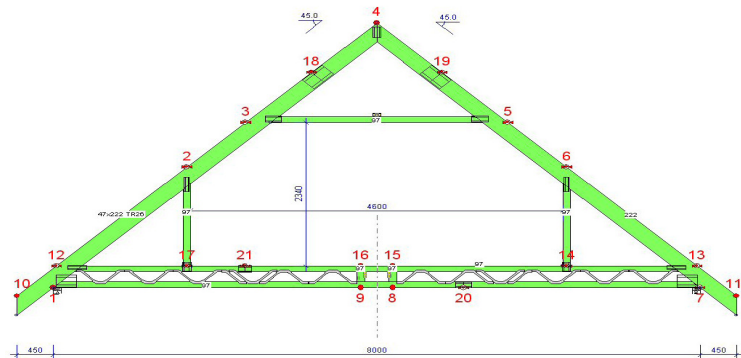


Overview

Attic Trusses

Attic trusses are now comparably as common as standard truss forms due to the ever increasing need to develop existing properties within the roof space and for new builds to accommodate more floor space on reduced footprints.



The GN Roof & Truss software has speedy macros to design and detail these requirements using standard construction elements of solid timber and GN plates but it is now becoming quite common to incorporate Ecojoist as the bottom chord of the truss. The design office of Gang-Nail have the ability to design the Ecojoist as the bottom chord within the attic truss within Roof & Truss but before any further development work is commenced to

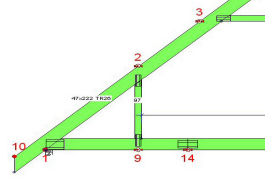


provide this functionality to all of our users we would like to obtain your views and feedback on this method of attic truss design.

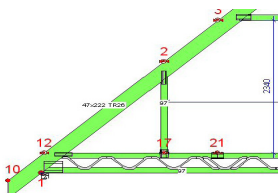
There are distinctive advantages and disadvantages towards this construction method that can only be concluded by the end client, potentially due to build constraints and cost. The following information will provide specific comparisons against both options.

Span Comparisons

The following information is based on a common 45° roof pitch with standard roof loading.

TRUSS TYPE	SPAN (mm)	ROOM DIMENSIONS (mm – width x height)	
Common Attic	8000	5200 x 2340	
Common Attic	9000	5400 x 2340	
Common Attic	10000	5400 x 2340	

Overview

TRUSS TYPE	SPAN (mm)	ROOM DIMENSIONS (mm – width x height)	
Attic with Ecojoist	8000	4600 x 2340	
Attic with Ecojoist	9000	5250 x 2340	
Attic with Ecojoist	10000	5050 x 2340	

The purpose of using Ecojoist as the bottom chord within attic trusses is not only to add value in the build process but also to provide consistency within a building if Ecojoist is used on subsequent lower floors. Quite often Ecojoist is chosen due to its design capacity and due to its open web design, services and utilities can be installed quicker, as a result, reducing labour costs and on site build times.



Aperture Details	WEB SIZE	D	X (max)	Y	S	H	W
	V2-8	120	505	125	105	75	210
	V2-10	154	505	158	133	97	208
	V2-12	192	505	209	155	121	215
	V2-14	252	505	285	204	160	283
	V2-16	263	505	323	212	179	266

With sustainable code level 3 requirements being enforced in 2010, resulting methods of additional point scoring can be achieved by integrating mechanical ventilation and heat recovery systems into the build process. Access through floor zones is almost a necessity to achieve this and with the open webs of the Ecojoist and large aperture zones, the design of the structure doesn't have to be compromised to achieve these new requirements.



Using Ecojoist as the bottom chord increases the overall floor zone depth due to the requirement to rotate the top and bottom chords of the joist to match that of the remaining attic timbers. With the webs taken into account, the overall depth of the bottom chord increases from 222mm to 353mm.

For more information contact the Gang-Nail® Technical Department on 01252 334691