DESIGN GUIDELINES:

DG07. NOTICE TO DESIGNERS

Recent media attention in nail plated timber structure failures has highlighted the risks associated with some engineered floor joist products. Engineers are encouraged to look at Tecbeam as an alternative product that offers lower risk and greater margins of safety. The structural performance of the joists can be easily checked and verified without relying on the manufacturer to design using their exclusive software. Tecbeam endeavours to provide joist products that are supplied with full engineering properties, including bending and shear strength capacities, and span tables that clearly identify the design criteria used, providing the Engineer with greater control over their designs.

In some truss-type joist products, the Engineer may specify a certain size for extra stiffness or strength (i.e. deliberately over span), the final product that is supplied, however, may have been 'economised' by reducing the number of web components to match the shorter span loading. This practice however can compromise the stiffness behaviour, strength and safety. The Engineer may not be aware his design has been modified, unless he gets feedback on such things as excessive vibration. The current practice of specifying the next size joist may not achieve what the Engineer or Builder had intended.

With Tecbeam floor joists, the Engineer can be confident that the joists won't be compromised; this is because it has a continuous patented steel web that ensures predictable performance consistent with the published section properties. There is no need to specify the next sized joist.

A significant benefit in using Tecbeam floor joists is the safety inherent in this product. Testing and installation in thousands of homes, residential units, commercial buildings, hospitals, schools and factories have confirmed the reliability, superior performance and safety of Tecbeam floor joists.

The graph below illustrates typical load vs deflection performance curves for various types of floor joists. Note the high ductility of Tecbeam floor joists and the residual capacity due to the continuous ductile steel web (approx. 50% of the working load).