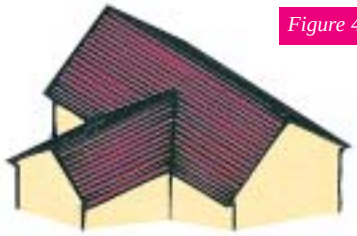
Valley Intersections

Figure 47a



'Tee' Intersections and Valley Infill

The basic junction of two roofs is known as a 'Tee' intersection, where a valley line will be formed at the point of intersection of the two sloping planes. The construction around the valley area is commonly formed by the use of either timber rafters, valleyboards and ridgeboards (not recommended) or by the use of pre-fabricated valley frames.

Figure 47b

It is strongly recommended that valley frames be used in junction areas, as these provide the quickest, cheapest and most structurally effective solution to the roof framing in these areas.

The use and function of the valley frames are more important than they appear. The individual components transfer the roof loadings to the top chords of the underlying standard trusses in a uniform manner. Acting with the tiling batten between each neighbouring pair of components, they provide lateral stability to the same chords.

Some variations on the basic system are shown in figure 49. Others occur from time to time and suitable layouts can be easily devised by MiTek trussed rafter suppliers.

The layboards shown in figure 48 are in short lengths and supported off battens nailed to the sides of the rafters, to lie flush with the tops of the rafters. This enables the felt and tiling battens to be carried through into the valley. The tile manufacturers advise should be sought to ensure correct tile and pitch suitability.

In many cases, the support for the main roof trusses may be provided by a multi-ply girder truss as shown in figure 48, with the incoming trusses supported in proprietory Girder Truss Shoes at each intersection.

It is common practice on site to erect the girder truss first and position the incoming trusses afterwards.

All MiTek girders are designed to resist stresses induced in the bottom chords by the supported trusses. The connector plates on girders will typically be considerably larger than those on the standard trussed rafters.

Figure 48

TEE INTERSECTIONS

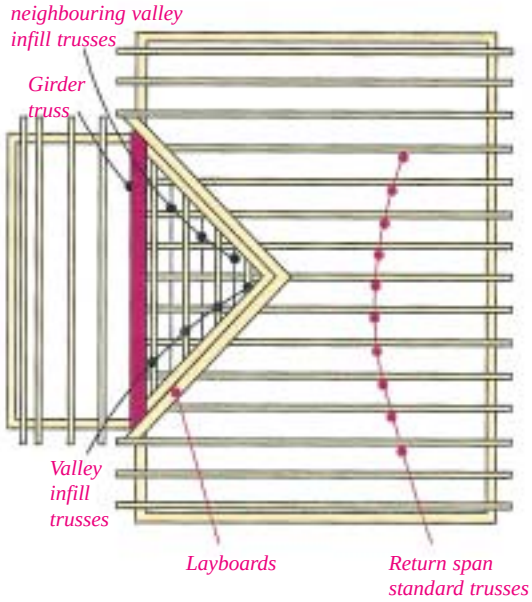


Figure 49

As described above, the valley construction should include intermediate tiling battens between neighbouring valley infill trusses, to provide the correct restraint for the rafters of the underlying trusses.

Figure 50

TYPICAL GIRDER TRUSSES