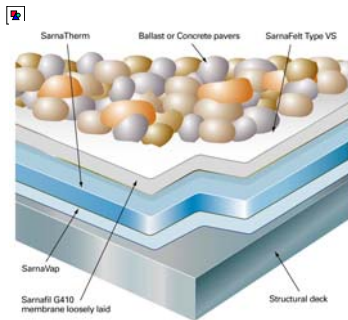


Loose Laid & Ballasted

This is a system whereby the membrane is loosely laid on the substrate and restrained by weight. The weight is supplied typically either by round washed ballast, paving slabs or soil and planting (green roof systems). Ballast may be used for both warm roof and inverted roof systems.

Where loose-laid membranes are secured against wind uplift by ballasting, it is likely that the areas of the membrane beneath the ballast will require different properties from the exposed areas. The covered membrane will need to be resistant to bacterial attack, but will not need resistance to ultra violet light, whilst the reverse is true for the exposed membrane. Thus, different products may be required. Some manufacturers identify each by different colours. Care must be taken to ensure the correct membrane is used on exposed areas, such as upstands, to avoid UV degradation.



A separation layer may be specified over the waterproof membrane. This is to prevent mineral fines from becoming trapped in the insulation joints or at membrane level. Care should be taken to ensure the separation layer is applied in all areas where an interface may occur between the insulation and the waterproofing membrane. This is normally achieved by turning the separation layer up at all perimeter edges of the insulation boards and at all roof penetrations.

Gauge boards should be placed to match the specified depth and ballast should be spread between them. The correct depth of ballast should be levelled off with a straight edge and the gauge boards moved on. Paving slabs should be set out to minimise cutting. Slabs should be laid in a forward direction, working from the roof access point to minimise trafficking on the unprotected membrane. Slabs should be laid on specified protection layers and corner supports may additionally be specified. They should not be tightly butted to perimeter upstands, but a minimum gap of 75mm should be allowed and filled with rounded gravel or ballast. Care should be taken not to exceed the limitations on roof loading.

Gravel guards should be in place on all roof outlets before ballast is laid.

Note: If there is to be any delay in applying the finishing ballast, a temporary ballast should be applied (e.g. sand or gravel, wrapped in bags) to prevent damage to the system. This should be strategically placed across the finished roofing. Partial bonding with adhesive may sometimes be specified to allow for movement within the substrate. This technique should not be used unless expressly called for by the designer, who will have carried out the necessary wind uplift calculations.