

## 3. ROOFING

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### ROOFING

Long-run roofing is a popular and relatively cheap roofing material. Long-run means that the roofing is in one sheet from ridge to eaves and there is no need for end laps. Roofing can either be of the Dimondek (pan type) with clipped side-laps that can be laid at a very low pitch and are suitable for high-wind site, or they are variations of corrugated iron which require side laps and a 12 degree or so slope to ensure rapid run-off. Roofing material can span 900mm to 2400mm depending on profiles (structural depth) and gauge (sheet material thickness.)

## BUILDING PAPER

The purpose of roofing paper is to absorb or channel any water which might get through the roofing; also to absorb condensation which forms on the underside of the cold roof and to release it when the roof heats up during the day.

## NETTING

The building paper is usually supported by wire netting stretch over the purlins or rafters. On industrial buildings the netting has the secondary purpose of preventing workers on the unfinished roof accidently falling to their death onto the concrete floor.

## ROOF INSULATION

Foil is often used as a form of insulation on industrial roofs. If fiberglass batts are also used, care needs to be taken when specifying the sequence of materials that condensation forming on the underside of the roofing is not absorbed by the batts. This may require two layers of paper.

## SKILLION ROOFS

Skillion roofs are essentially roofs where there is no air gap between the (plastered Gibraltar board) ceiling linings and the roofing material ie there is no ceiling space. There is no air circulation, any moisture is trapped for a long time and currently the timber used in this area is required to be treated to higher standard than wall framing.

## PURLINS

Technically these are the members immediately supporting the roofing and may be as short as 900mm spanning between timber trusses or rafters or as long as 9 metres spanning between steel portal frames. Short-span purlins are usually timber ex 100 x 50 framing while purlins over 4ms or so usually made in the form of cold-rolled steel in a "C" or "Z" profile.

## TIMBER ROOF TRUSSES

Timber roof trusses allow small and relatively inexpensive pieces of standard timber to span large distances, this being achieved by the triangulated geometry of the trusses. Nowadays, the members of the truss are connected by gang-nail plates which are applied by a hydraulic press. The design of these gang-nail truss is either carried out by the manufacturer (or more likely selected from a range of standard designs.) Such trusses are usually supplied with a manufacturer's design certificate which may state which project they are intended for and the loadings assumed in the design.