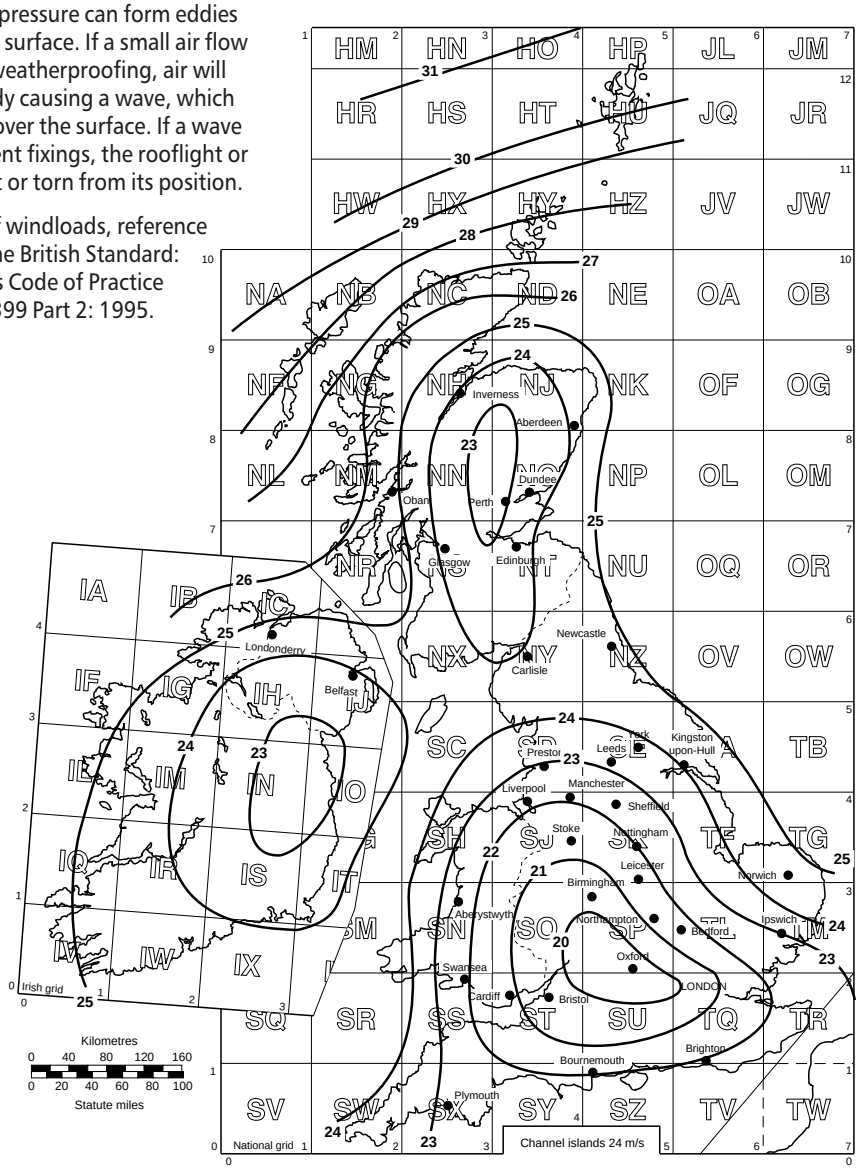
A number of roof failings in the UK are due to wind damage, therefore protection against wind forces should be one of the principal design considerations. It is important that wind suction forces are calculated. Various factors influence the wind suction forces, such as locations, topography, surrounding buildings, height, shape, width and roof pitch of the building. On the windward side of the building, cladding and roofing panels experience a positive force, while on the leeward side there is a negative (suction) force. Higher wind forces occur adjacent to verges and corners.

It is the negative wind suction forces, which are important. Negative pressure can form eddies when crossing a roof surface. If a small air flow develops under the weatherproofing, air will collect below the eddy causing a wave, which will follow the eddy over the surface. If a wave occurs with insufficient fixings, the rooflight or cladding may be split or torn from its position.

For the calculation of windloads, reference should be made to the British Standard: Loading for Buildings Code of Practice for Wind Loads BS 6399 Part 2: 1995.

Our sales office will be able to assist to provide any detailed wind load calculations for Contour and StepSafe rooflight applications.

For applications such as Contour OTT in normal exposed areas a 1.83 kg/m² sheet weight will be adequate on roofs not greater than 10 metres in height, with fixings through each corrugation. Within certain areas of the roof, it may be advisable to use the heavier grade 2.44 kg/m² sheet where local wind forces are high.



Basic wind speed V_b (in m/s)