Local pressure factor Kl

Amplification factor

Applies only to claddings, their directly supporting members and the immediate fixings of claddings and supporting members. This would include door and window framing when these members support cladding.

Permeable cladding factor Kp

Concessional factor.

Applies to very specific cladding types not normally used in shed design.

Frictional drag force F

An additional wind-related action effect to be considered.

Applies to buildings of particular geometry.

2.2 SNOW ACTIONS (F_{sn})

The majority of steel sheds and garages constructed in Australia will have their ultimate limit state governed by wind actions. However, in certain alpine and sub-alpine areas it is just as important to consider the effects of snow actions. To account for these actions in such areas is critical, especially considering that all of these areas are located in wind region A (resulting in the lowest wind pressures in Australia and hence the most lightweight and efficient designs if only wind actions are checked). ***Buildings should not fail when subjected to the snow event for which they are certified to be designed.***

As with estimating wind loads, the estimation of future snow actions is based on probability. The maximum snow action to *ever* be experienced in any specific area cannot be known, but through the use of data collected over time the probability of a certain snow loading event occurring or being exceeded, during a set period of time, can be calculated. Consequently, the magnitude of a snow loading event associated with a required probability of being exceeded can also be calculated.

The NCC requires that the annual probability of exceedance, used to determine the snow actions, be taken from the below table based on the importance level of the building.

TABLE 9 SELECTION OF EXCEEDANCE RISK BASED ON IMPORTANCE LEVEL FOR SNOW EVENTS

IMPORTANCE LEVEL	ANNUAL PROBABILITY OF EXCEEDANCE FOR SNOW ACTION
1	1:100
2	1:150
3	1:200
4	1:250

Source: NCC Table B1.2b

The NCC further requires that snow actions required to be resisted by a specific building be determined in accordance with AS/NZS 1170.3. AS/NZS 1170.3 defines snow action (F_{sn}) as “the sum of the forces resulting from the accumulation of snow determined by applying the snow load(s) to appropriate areas of the structure.” The following sections of this design guide deal with the calculation of these snow loads.

Designers should be aware that compliance with this Design Guide does not ensure compliance with AS/NZS 1170.3. This Guide contains no guidance on ice actions, which is included in AS/NZS 1170.3.

CONTENTS