

WIND REGIONS OF AUSTRALIA

With 6500+ Shelters delivered to the remotest sites in Australia and exported to 41 countries throughout the world, DomeShelter Australia is well experienced in designing and engineering Industrial Fabric Structure Buildings for all wind code areas and conditions. Potential wind speed is just one of many factors considered when designing any building, including DomeShelter™ Fabric Structures.

Our expert team of Designers and Engineers will ask where your DomeShelter™ project will be located, and if there are any specific site criteria to be met and develop a certified engineering solution that works!

In Australia, we design product in accordance with AS/NZS 1170.2:2011 (R2016) which classifies Wind Loading in the following map and tables.

The Region refers to the location. The Terrain Category refers to the description of the terrain at the location.



| AUSTRALIAN WIND REGION | Ultimate Regional Wind Speed (Km/Hr) | Importance Level | Terrain Category | Design Wind Speed (Km/Hr) |
|----------------------------|--------------------------------------|------------------|------------------|---------------------------|
| Region A - Normal | 162 | 1 | 2 | 148 |
| | | 2 | 2 | 155 |
| Region B - Intermediate | 205 | 1 | 2 | 164 |
| | | 2 | 2 | 178 |
| Region C - Cyclonic | 248 | 1 | 2 | 202 |
| | | 2 | 2 | 219 |
| Region D - Severe Cyclonic | 316 | 1 | 2 | 250 |
| | | 2 | 2 | 273 |

*Design working life 25yrs/max avg. height of 10m

TERRAIN CATEGORY

Terrain Category is a measure of the wind-breaking effect on the terrain surrounding your building site. The more your Fabric Structure is surrounded by trees, other buildings, and structures, the less exposed it is to the full force of the wind.

It's broken into three main categories:



- This requires the strongest DomeShelter™ structure.
- This exposed open terrain condition is rare, with few or no obstructions.
- Isolated Fabric Covered Structures in flat, treeless, poorly grassed areas of at least 10km width would be considered Category 1.



- This is the most common terrain category for rural sites, and all Domeshelter™ Structures are fabricated to Category 2 as standard.
- Open terrain, grassland with few, well-scattered obstructions having heights generally from 1.5 m to 10m.



- Requires least Structural strength.
- Terrain with numerous closely spaced obstructions 3 m to 5 m high.
- This is the most common terrain category in suburban and wooded areas.

IMPORTANCE LEVELS

| | |
|---------|--|
| Level 1 | Temporary Buildings or Buildings with a low degree of hazard to life and other property in case of failure |
| Level 2 | Buildings not assigned levels 1, 3 or 4 e.g. Main Workshop, Offices, Medium size Manufacturing facility |
| Level 3 | Buildings designed to contain a large number of people |
| Level 4 | Buildings essential to post disaster recovery or associated with hazardous facilities |

The Building Code of Australia (BCA) has four importance levels used to define the risk that a structure composed of steel is likely to pose on surrounding people.

The importance level is based purely on the safety of the building, and therefore is integral to be considered for correct engineering.

Being a safe environment, and Engineered to Protect, as standard all Domeshelter™ Structures are fabricated to Imp. Level 1, however can be engineered to Imp. Level 2 upon request.

*Design Wind Speed is calculated using specific Design Criteria (Terrain Category, Importance Level etc) related your site requirements. An example is: Wind Region Reg B, Importance level 1, Terrain Category 2, Design working life of 25 years and a maximum average height of 10m = Design Wind Speed 164km/hr. While terrain category 2 is the most common for Domeshelter Structures, it can vary, and in this instance a consultant will ensure this is considered for engineering. All Fabric Structures should take the wind code and terrain category into account, no matter the geographic location. Please note that wind speeds are for indication only and are subject to final design parameters of site and scope.