

## Inconsistencies between SA Wind farm and Frost Fan noise guidelines and setbacks/separation distances. M Morris June 2015

Planners report Berri Barmera DAP agenda October 2014.

The frost fan towers are **10.380 metres high and 2.440 metres wide** including the fan blades.

**There is no question that frost fans can be visually imposing, primarily due to height.**

Principle of Development Control 1

*Development should not detrimentally affect the amenity of the locality or cause unreasonable interference through any of the following:.....*

*(b) noise (g) hours of operation*

(6) Table

Land use category	Allowable noise level (dB(A))	
	Measurements outside	Measurements within habitable room
Residential or Rural Living	45	25
Rural Industry or Light Industry	55	35

Separation distances:

The EPA also provides guidelines for separation distances to listed land uses. The guidelines specifically set down a separation distance for noise emissions of **2000 metres for frost fans**

(3) If the fan is operated simultaneously with other frost fans at the same premises (whether on every occasion of its operation or some occasions only), measurements taken for the purposes of subclause (1)(d) must be taken in relation to the noise emitted when all the fans are in operation.

South Australia

**Environment Protection (Noise) Policy 2007**

under the *Environment Protection Act 1993*

### Frost Boss Technical Bulletin

#### What's the pro and cons of 2 and 4 blade wind machines?

The major source of noise from a wind machine stems from the **tip speed of the fan** so **the longer the blades and the higher the revs the more noise is produced.**

#### Are 4-Blade fans really that much quieter?

Yes they are. Not only is the fan running much slower, but the engine is running slower too. So both the aerodynamic (fan tip) and the mechanical noises are reduced. Furthermore, **the low frequency 'thwack, thwack, thwack' beating sound** is not present with the Frost Boss 4-Blade fan. **And it is this sound that is most annoying on still nights because it is a low frequency sound, and it carries much further than high frequency sounds.** This is just like your neighbour playing music really loud, and all you can hear is the base beating away and no music to go with it.