



Noise Analysis

Update: 05/2019



How is noise measured in the Latrobe Valley?

The EPA is responsible for ensuring noise from industry does not impact the surrounding residences and businesses. In doing so they provide guidelines on what the maximum recommended noise levels should be from any local businesses. These are measured at Noise Sensitive Areas (NSAs) around the Maryvale Mill in each direction - north, south, east, and west.

These are determined using a methodology that takes into account:

- Land use zones for the emitter and receptor (Noise Sensitive Area or NSA)
- Distance between the emitter and receptor
- Background noise levels

The following table provides the EPA's recommended limits for north, south, east, and west of the Maryvale Mill.

Noise Sensitive Areas (NSAs)	Recommended Maximum Noise Levels (set by the EPA)		
	Day (07:00 to 18:00)	Evening (18:00 to 22:00)	Night (22:00 to 7:00)
North	45	39	34
South	54	49	44
East	45	37	32
West	47	42	37



Understanding noise levels

The following diagram¹ (right) provides the typical sound levels associated with commonly heard sounds.

- 85dB** Prolonged exposure to any noise at or above this level can cause hearing loss
- 110dB** 110dB Regular exposure of more than 1 minute risks permanent hearing loss

Eardrum Perforation Possible	160	Pistol shot	
	150	Fireworks display	
Painful Acoustic Trauma	140	Shotgun blast	
Painfully Loud	130	Jet engine 25m away, motor racing	
	120	Rock concert, thunder	
Extremely Loud	110	Car horn, snowblower, Pneumatic Hammer	
	100	Blow dryer, subway, helicopter, chainsaw	
PROTECT YOUR EARS	90	Motorcycle, lawn mower, convertible ride on highway	
Very Loud	80	Factory, noisy restaurant, vacuum, screaming child	
Loud	70	Car, alarm clock, city traffic	
EfW Range	60	Conversation, dishwasher	
	Moderate	50	Moderate rainfall
	Faint	40	Refrigerator
	30	Whisper, library	
	20	Watch ticking	
	dB levels		

1. <http://hearingsense.com.au/causes-of-hearing-loss/>

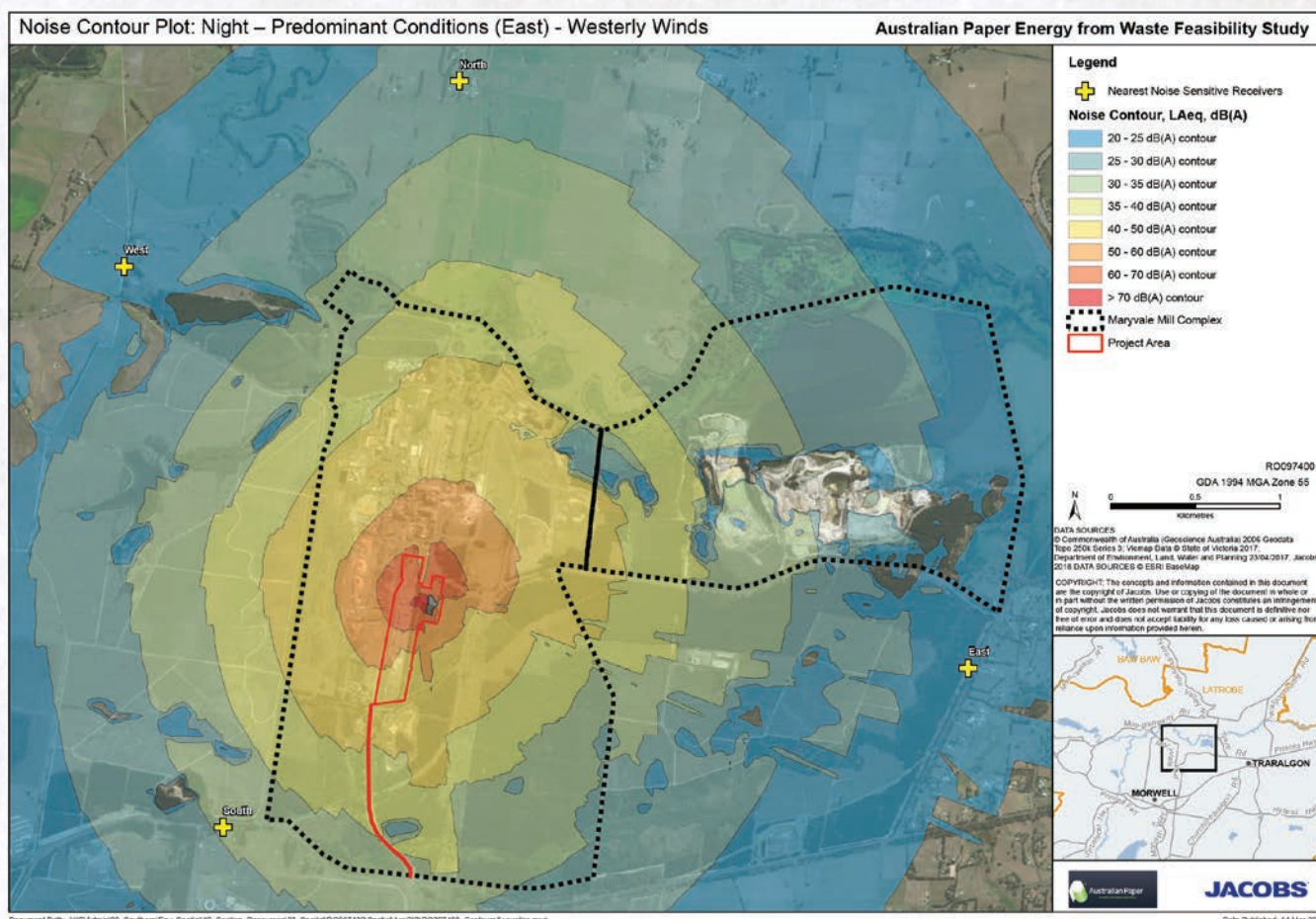


Noise levels from the potential EfW plant

Australian Paper has applied a noise model to predict the noise levels from the EfW plant. This was done to assess whether the noise created by the EfW plant will be below the recommended maximum noise levels as set by the EPA.

Our modelling has found that all noise from the plant will not reach the Recommended Maximum Noise Level (RMNL) limits set by the EPA.

Below are the results of the modelling which shows the probable night time noise levels which are considered the 'worse-case' scenario.



For each of the Noise Sensitive Areas (NSAs) around the Maryvale Mill, time periods, meteorological conditions and the predicted sound levels from the current model are tabulated below. In all instances the noise levels are below the RMNLs.

NSAs	Predicted sound pressure level (dB)			RMNLs			Compliance with RMNLs		
	Day	Evening	Night	Day	Evening	Night	Day	Evening	Night
Neutral meteorological conditions									
North	23	23	23	45	39	34	Y	Y	Y
East	19	18	18	45	37	32	Y	Y	Y
South	32	31	31	54	49	44	Y	Y	Y
West	25	25	25	47	42	37	Y	Y	Y
Predominant meteorological conditions - westerly winds									
North	28	28	28	45	39	34	Y	Y	Y
East	24	23	23	45	37	32	Y	Y	Y
South	31	31	31	54	49	44	Y	Y	Y
West	24	23	23	47	42	37	Y	Y	Y