



<b>Appendix R</b>	<b>Air Quality and Noise</b>	<b>1</b>
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## R.1 Air Quality

This section presents the monthly average dust deposition rates nearest sensitive receivers for Year 20 operations of the Project.

**Table R-1 Predicted monthly dust deposition results**

Description	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Olive Downs	31.8	20.9	9.0	9.3	13.8	2.5	12.1	35.2	39.0	42.3	55.0	42.9
Deverill	2.7	1.4	0.7	0.7	0.4	0.0	0.3	0.3	0.4	1.7	0.5	1.2
Winchester Downs	1.5	2.2	1.4	1.4	1.4	0.4	1.6	1.1	1.6	2.0	2.3	2.2
Grosvenor Downs	0.3	0.7	1.4	1.4	0.9	1.0	0.9	0.1	0.4	0.6	0.5	0.2
Daunia	1.1	1.4	0.3	0.3	0.5	1.0	0.6	2.4	1.0	0.6	0.4	0.9
Mavis Downs	0.1	0.3	0.1	0.1	0.4	1.2	0.6	2.3	0.8	0.3	0.1	0.3
Wotonga	0.9	1.0	2.2	2.3	1.5	2.4	1.5	0.3	0.3	0.5	0.1	0.2
Takara	0.1	0.5	1.2	1.2	3.2	3.1	2.3	1.2	1.3	0.1	0.1	0.2
Moorvale	0.0	0.1	0.3	0.3	0.9	1.5	1.7	1.2	0.3	0.1	0.0	0.0
Annandale	0.0	0.1	0.3	0.3	0.8	1.3	1.4	0.7	0.3	0.0	0.0	0.0

**Table R-2 Predicted dust deposition rate (maximum monthly average) at sensitive receivers**

Location	Description	Dust Deposition Rates (mg/m <sup>2</sup> /day)	
		Predicted increase	Including background
1	Olive Downs	55.0	200.0
2	Deverill	2.7	147.7
3	Winchester Downs	2.3	147.3
4	Grosvenor Downs	1.4	146.4
5	Daunia	2.4	147.4
6	Mavis Downs	2.3	147.3
7	Wotonga	2.4	147.4
8	Takara	3.2	148.2
9	Moorvale	1.7	146.7
10	Annandale	1.4	146.4

## R.2 Noise

This section details the calculation process that were carried out to obtain  $L_{r,1hour}$  dB(A) values shown in Table 12-8 of the Project EIS. The explanation below is followed by tables that contain calculations carried out for Olive Downs homestead, Daunia station, and Mavis Downs homestead.

To calculate the  $L_{r,1hour}$  dB(A):

- 1) Rating Background Levels (RBL) were determined using steps in Appendix B the 'Planning for Noise Control' guideline;
- 2) Where measured noise levels were less than 25 dB(A), these noise levels were corrected to an 'Acceptable (measured)  $L_{A90}$ ' level of 25 dB(A);
- 3) 'Differences' between the measured  $L_{A90}$  and recommended  $L_{A90}$  levels in Table 1 were calculated, and adjustments in Table 2 were applied to give  $L_{A90}$  max planning levels.
- 4) Where  $L_{A90}$  max planning levels were less than 25 dB(A), these levels are corrected to the threshold level 25 dB(A));
- 5)  $L_{A90}$  max planning levels were converted to  $L_{eq,1hour}$  dB(A) levels by adding 3. As tonality could not be determined using octave band equipment noise data, and impulsiveness of noise was considered unlikely, a the  $L_{eq,1hour}$  dB(A) levels were adopted as  $L_{r,1hour}$  dB(A) levels.

### Olive Downs Homestead

Olive Downs Homestead	Day	Evening	Night
Rating Background Level (RBL)	32	31	20
Acceptable (measured) $L_{A90}$	32	31	25*
Recommended $L_{A90}$ (Table 1, Very Rural)	35	30	25
Differences	-3	1	0
Adjustment (Table 2)	Minus 3 from recommended $L_{A90}$	Minus 10 from recommended $L_{A90}$	Minus 10 from recommended $L_{A90}$
Max Planning Level $L_{A90}$	32	25*	25*
Convert to $L_{eq,1hour}$	Plus 3	Plus 3	Plus 3
<b>Specific level <math>L_{r,1hour}</math> dB(A)</b>	<b>35</b>	<b>28</b>	<b>28</b>

\*Noise levels that are below 25 dB(A) are corrected to the threshold level of 25 dB(A)

### Daunia Station

Daunia Station	Day	Evening	Night
Rating Background Level (RBL)	35	35	28
Acceptable (measured) $L_{A90}$	35	35	28
Recommended $L_{A90}$ (Table 1, Very Rural)	35	30	25
Differences	0	5	3
Adjustment (Table 2)	Minus 10 from recommended $L_{A90}$	Minus 10 from recommended $L_{A90}$	Minus 10 from recommended $L_{A90}$
Max Planning Level $L_{A90}$	25	25*	25*
Convert to $L_{eq,1hour}$	Plus 3	Plus 3	Plus 3
<b>Specific level <math>L_{r,1hour}</math> dB(A)</b>	<b>28</b>	<b>28</b>	<b>28</b>

\*Noise levels that are below 25 dB(A) are corrected to the threshold level of 25 dB(A)

### Mavis Downs Homestead

Mavis Downs Homestead	Day	Evening	Night
Rating Background Level (RBL)	27	31	22
Acceptable (measured) $L_{A90}$	27	31	25*
Recommended $L_{A90}$ (Table 1, Very Rural)	35	30	25
Differences	-8	1	0
Adjustment (Table 2)	Add 5 to acceptable (measured) $L_{A90}$	Minus 10 from recommended $L_{A90}$	Minus 10 from recommended $L_{A90}$
Max Planning Level $L_{A90}$	32	25	25*
Convert to $L_{eq,1hour}$	Plus 3	Plus 3	Plus 3
<b>Specific level <math>L_r,1hour</math> dB(A)</b>	<b>35</b>	<b>28</b>	<b>28</b>

\*Noise levels that are below 25 dB(A) are corrected to the threshold level of 25 dB(A)