

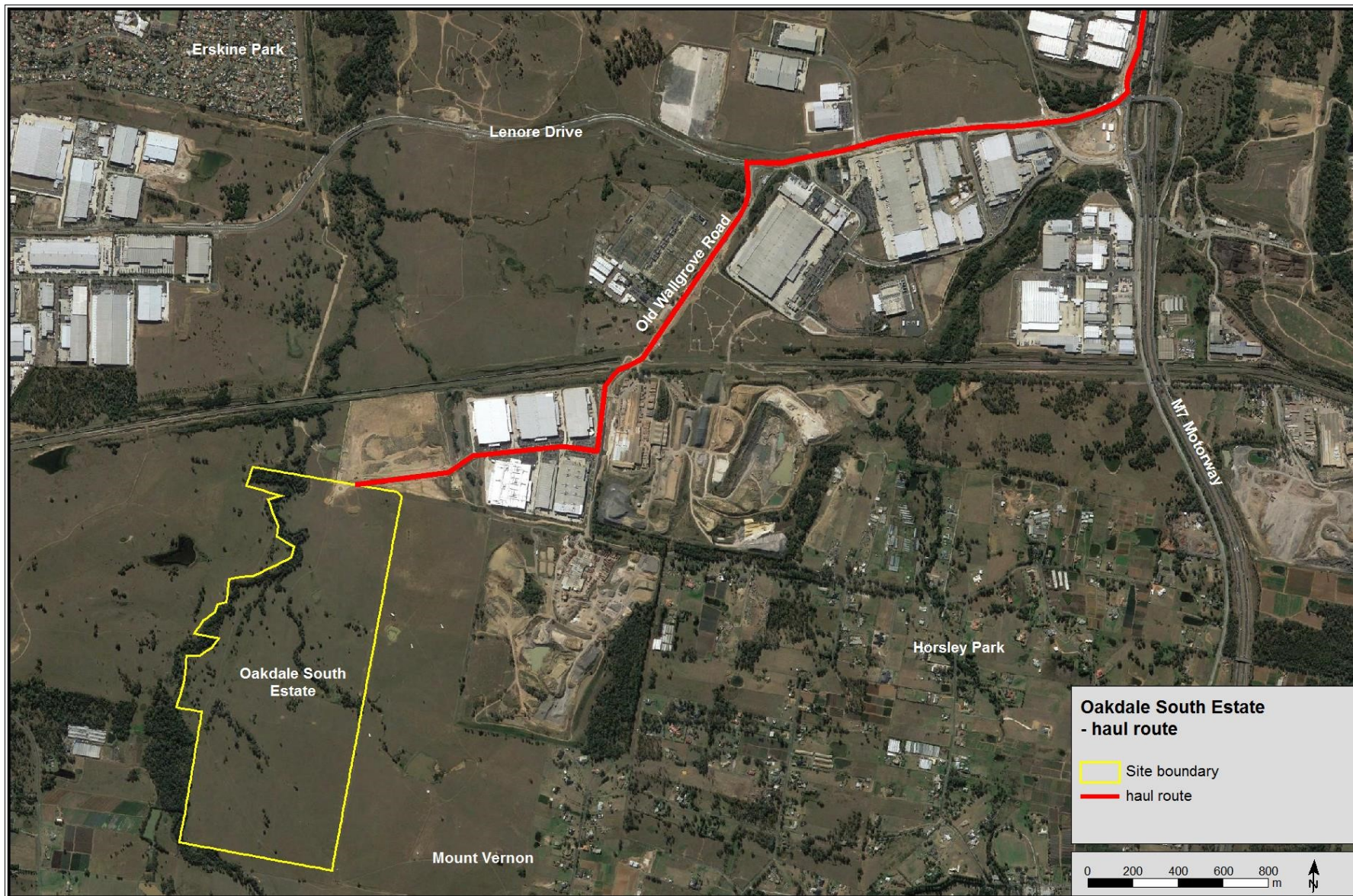


Figure 4-3 Proposed construction traffic access to compound

5. Controls and safeguards

5.1 Summary

Out of hour work represents a low risk of adverse impacts on sensitive receivers during the night period; however, activity in specific work zones should be undertaken with reduced equipment numbers to maintain noise at a practicable minimum and adhere to the project NMLs.

Mitigation measures described in the project noise and vibration management plan should be implemented together with the recommendations in Table 5-1.

Table 5-1 Standard mitigation measures

Administrative	
Community consultation	Potentially affected receivers would be notified of OOH works in accordance with the requirements of the NVMP. Where necessary, additional noise mitigation measures from the OOHW Protocol, as referenced in Section 3.4 will be implemented.
Site induction	The site Environmental Induction will be delivered by the Environmental Team in accordance with the CNVMP.
Noise control	
Equipment selection	Priority will be given to the use of quieter construction methods and plant alternatives where feasible and reasonable.
Equipment numbers	Avoid D10 dozer operation in work zones 1d, 2A, 2B to 1 at night.
Multiple work zones	If multiple work zones would be operational, undertake further assessment to determine acceptable equipment numbers and locations.
Use and siting of plant	Strategically utilise stockpiles as noise screens to the extent practicable. Plant used intermittently to be throttled down or shut down. Noise-emitting plant to be directed away from sensitive receivers where possible. Stationary plant should be located behind a structure or enclosed if practicable.
Non-tonal reversing alarms.	Non-tonal reversing beepers (or an equivalent mechanism) must be fitted and used on all construction vehicles and mobile plant regularly used on site and for any out of hours work.
Vehicle queuing	Vehicles would not queue outside the site
Monitoring	
Noise monitoring	Monitoring should be completed to verify the assumptions of this CNVIS regarding estimated equipment noise emissions.

Appendix A. Predictions for individual receivers

No.	LAeq, 15 minute noise level								
	NML		Predicted level by work zone						
	Eve	Night	1A	1B	1C	1D	2A	2B	3D
1	37	37	32	31	31	30	29	29	28
2	37	37	28	28	28	27	27	26	27
3	37	37	35	35	33	33	32	31	29
4	37	37	24	23	24	23	23	22	23
5	39	39	31	34	33	35	35	36	33
6	38	38	28	27	28	28	28	27	30
7	39	39	34	34	34	34	35	36	32
8	39	39	27	28	33	29	33	35	31
9	39	39	30	28	31	31	34	35	31
10	38	38	34	33	35	34	35	33	37
11	39	39	33	34	35	37	36	37	32
12	39	39	33	36	37	38	37	38	33
13	38	38	27	26	27	27	27	26	29
14	38	38	31	30	31	30	31	30	34
15	38	38	29	28	29	28	29	28	31
16	38	38	29	29	30	29	30	29	32
17	38	38	24	23	24	24	24	24	26
18	38	38	28	27	28	27	28	27	30
19	39	39	33	33	37	39	37	38	34
20	39	39	34	34	36	37	36	37	33
21	39	39	34	34	35	37	36	37	33
22	38	38	36	36	38	37	38	37	43
23	39	39	34	35	36	37	36	38	33
24	39	39	35	36	37	38	37	38	34
25	39	39	34	35	35	37	36	37	33
26	38	38	34	33	35	34	35	34	39
27	39	39	35	36	36	37	36	37	33
28	39	39	38	39	40	41	41	42	37
29	39	39	36	36	38	40	39	40	36
30	38	38	35	34	36	35	36	36	41
31	39	39	36	36	38	39	39	40	36
32	38	38	27	26	27	27	27	27	30
33	38	38	37	36	38	37	39	38	45
34	39	39	37	38	39	40	40	41	37
35	39	39	36	36	37	38	38	39	35
36	39	39	37	38	39	40	40	41	37
37	39	39	34	35	35	36	36	37	33

38	39	39	35	35	35	37	36	37	34
39	39	39	37	38	39	40	40	41	37
40	39	39	36	37	37	38	38	39	35
41	39	39	36	37	37	38	38	39	35
42	38	38	35	34	36	35	37	36	42
43	39	39	36	36	38	39	39	40	37
44	38	38	28	27	29	28	29	28	32
45	38	38	27	26	27	27	27	27	30
46	39	39	36	36	37	39	39	40	36
47	39	39	35	36	37	38	38	39	36
48	38	38	34	33	35	35	36	35	41
49	38	38	21	21	22	21	22	21	24
50	39	39	36	37	38	39	39	40	37
51	39	39	35	35	37	38	38	39	36
52	38	38	35	34	37	36	38	37	44
53	38	38	26	25	26	26	26	26	29
54	39	39	35	36	37	38	38	39	36
55	39	39	35	34	36	37	37	38	36
56	38	38	25	25	26	25	26	26	29
57	39	39	32	33	33	34	33	34	32
58	39	39	35	36	36	37	37	39	36
59	38	38	33	33	35	34	35	35	40
60	38	38	34	34	36	35	37	36	43
61	39	39	34	35	35	36	37	38	35
62	39	39	33	32	35	35	36	36	34
63	38	38	33	32	34	34	35	34	40
64	39	39	34	34	35	36	36	37	35
65	38	38	34	33	36	35	36	36	42
66	39	39	34	35	36	37	37	38	36
67	39	39	35	35	37	38	38	39	38
68	38	38	27	26	27	27	28	27	30
69	38	38	33	33	35	34	36	35	41
70	38	38	26	25	26	26	27	26	29
71	39	39	34	35	36	37	37	38	37
72	39	39	34	34	35	36	37	38	36

No.	LAeq, 15 minute noise level								
	NML			Predicted level by work zone					
	Eve	Night	1A	1B	1C	1D	2A	2B	3D
73	39	39	34	35	36	37	38	38	37
74	38	38	32	31	34	33	34	34	39

75	39	39	33	34	35	36	36	37	36
76	38	38	26	25	26	26	27	26	29
77	38	38	31	31	33	32	34	33	38
78	38	38	26	25	27	26	27	27	30
79	38	38	26	25	26	26	27	26	29
80	39	39	34	34	36	36	37	38	38
81	38	38	26	25	27	26	27	27	30
82	38	38	32	32	34	33	34	34	40
83	38	38	25	25	26	26	26	26	29
84	39	39	33	34	35	36	37	38	38
85	39	39	33	33	34	35	36	37	37
86	38	38	25	25	26	26	26	26	29
87	39	39	33	33	35	35	36	37	37
88	38	38	31	30	32	32	33	32	37
89	39	39	33	33	35	35	36	37	38
90	38	38	31	31	33	32	34	34	39
91	39	39	33	33	34	35	36	36	37
92	39	39	32	33	34	34	35	36	35
93	39	39	32	33	34	35	35	36	36
94	38	38	26	26	27	27	27	27	31
95	38	38	30	30	31	31	32	32	36
96	38	38	25	25	26	26	26	26	29
97	39	39	31	32	33	33	34	35	34
98	39	39	32	33	34	35	35	36	37
99	38	38	28	28	30	29	30	30	34
100	39	39	32	32	34	34	35	35	36
101	39	39	30	31	31	32	32	33	32
102	39	39	32	32	34	34	35	36	37
103	39	39	32	32	33	34	35	35	36
104	39	39	31	32	33	33	34	34	34
105	39	39	31	32	32	33	34	34	34
106	39	39	31	32	33	34	34	35	36
107	38	38	29	29	31	30	31	31	35
108	38	38	25	25	26	25	26	26	29
109	39	39	30	29	31	32	32	33	32
110	39	39	31	31	32	33	33	34	34
111	39	39	31	32	33	33	34	35	35
112	39	39	30	30	31	31	32	32	32
113	38	38	31	30	32	32	33	33	38
114	38	38	27	26	28	27	28	28	31
115	39	39	31	31	32	33	34	34	35

116	39	39	31	31	32	33	34	34	35
117	39	39	30	31	32	32	33	33	34
118	39	39	30	31	32	32	33	33	33
119	39	39	29	30	31	31	32	32	32
120	39	39	31	31	33	33	34	34	37
121	39	39	29	30	31	31	32	32	32
122	39	39	31	31	33	33	34	34	37
123	38	38	27	26	28	27	28	28	31
124	39	39	30	31	32	32	33	34	34
125	39	39	29	30	31	31	32	32	32
126	39	39	30	31	32	32	33	34	35
127	39	39	30	30	31	32	32	33	33
128	39	39	30	31	32	32	33	34	36
129	38	38	30	30	32	31	32	33	37
130	39	39	30	30	31	32	32	33	33
131	39	39	30	31	32	32	33	34	36
132	39	39	30	30	32	32	33	33	34
133	39	39	30	31	32	32	33	33	34
134	39	39	30	31	32	32	33	34	36
135	39	39	30	30	32	32	33	33	36
136	39	39	29	30	31	31	32	33	33
137	39	39	30	30	31	32	32	33	34
138	39	39	30	30	32	32	33	33	36
139	39	39	29	29	30	31	32	32	32
140	39	39	30	30	31	32	32	33	34
141	39	39	30	30	32	32	33	33	36
142	38	38	28	27	29	29	30	30	34
143	38	38	29	29	31	31	32	32	36
144	39	39	30	30	31	32	33	33	35

No.	LAeq, 15 minute noise level								
	NML			Predicted level by work zone					
	Eve	Night	1A	1B	1C	1D	2A	2B	3D
145	39	39	29	30	31	31	32	32	33
146	39	39	30	30	31	32	32	33	35
147	38	38	26	25	27	27	27	27	31
148	39	39	29	30	31	31	32	33	34
149	39	39	29	30	31	31	32	33	35
150	39	39	29	30	31	31	32	32	34
151	39	39	29	30	31	31	32	32	34
152	39	39	29	29	31	31	32	32	35

153	39	39	29	29	30	31	31	32	32
154	39	39	29	30	31	31	32	32	34
155	38	38	26	25	27	26	27	27	30
156	39	39	29	29	31	31	32	32	35
157	39	39	29	29	31	31	32	32	35
158	38	38	29	28	30	30	31	31	35
159	38	38	25	24	26	26	26	26	29
160	39	39	29	29	31	31	32	32	34
161	39	39	29	29	30	31	31	32	33
162	39	39	29	29	31	31	32	32	34
163	39	39	28	29	30	30	31	31	32
164	39	39	28	29	30	30	31	31	33
165	39	39	29	29	30	30	31	32	34
166	39	39	28	29	30	30	31	32	33
167	39	39	29	29	30	30	31	32	34
168	38	38	28	27	29	29	30	30	34
169	39	39	28	28	30	30	31	31	34
170	39	39	28	29	30	30	31	32	34
171	39	39	28	29	30	30	31	32	33
172	39	39	28	29	30	30	31	31	32
173	38	38	26	26	28	27	28	28	32
174	39	39	28	28	29	30	30	31	32
175	39	39	28	28	30	30	31	31	33
176	39	39	28	28	29	30	30	31	32
177	39	39	28	28	29	29	30	31	33
178	39	39	28	28	29	30	30	31	33
179	39	39	28	28	29	29	30	31	33
180	39	39	28	28	29	30	30	31	33
181	38	38	26	25	27	27	28	28	31
182	38	38	27	27	29	28	29	29	33
183	38	38	26	26	27	27	28	28	31
184	38	38	26	26	27	27	28	28	32